



# WORDPRESS WEB DESIGN

Dr. EVD Sastry  
Rakesh Kumar Dwivedi

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**BOOKS ARCADE**

KRISHNA NAGAR, DELHI

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## CHAPTER 1

# EXPLORING WEB DESIGN WITH WORDPRESS

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As you learn that WordPress can be used for more than simply creating blogs, you start to see the software's potential and how you can use it to improve your website-building processes. When my customers contacted me in 2005 and requested more than just a blog for their websites, the lightbulb moment for me occurred. Several of them had small companies and wanted to expand their websites beyond just displaying their blog articles in reverse chronological order. You learn about the idea of utilizing WordPress as a content management system in this chapter (CMS). You learn what CMS really entails and discover how you may use it to improve the design of your own websites. You also learn what kinds of material the WordPress programme can publish and how to use that content to create dynamic websites. This chapter also exposes you to the world of WordPress themes, including what is already readily usable, what you can customize to your preferences, and what you can explore further to learn more about WordPress design and theme development. You learn which themes are available for free and which ones need payment to utilize [1].

### Delving Into the Differences between Blogs and Websites

If you have read the book's introduction, you are aware that WordPress publishing is assumed to be familiar to you. As a result, you probably already know what a blog is and how to spot one when you see one online. But just in case, a blog is often a record of the posts or articles that you as a blogger have published online, organised chronologically. Most of the time, having merely a blog on a domain suits many individuals just fine. These folks are known as bloggers since all they do on their domain is blog. Figure 1 depicts how a typical blog might appear, with blog articles shown in one column and menu items and navigation links in a smaller column to the left or right.

You must sit down and plan which of the numerous WordPress capabilities you're going to employ, as well as how and where you're going to incorporate them into the website, before you can begin building it. A nice example of utilising WordPress as a content management system (CMS) to design and develop a small business website is my company website, WebDAV Studios (<http://webdevstudios.com>). In Figure 2, for instance, you can see that the homepage page of my company's website does not resemble a typical blog at all. Yet, if you look at the top, you can notice a link to the blog. With a structure must be capable of the WordPress software on your web hosting account, you can manage and maintain several areas of your website and alter the visual appearance, style, and layout of the site using the WordPress theme templates [2].

My company website has a blog, but it's not the primary focus of the information there.

- i. A front-page gateway that shows material from many internal website pages is one example.
- ii. A collection of design projects.



- iii. A section of frequently asked questions that readers may peruse to learn more about my design services.
- iv. A page with client endorsements.
- v. Particular pages that list the company's terms, services, and privacy policies.
- vi. A contact email form that enables readers to reach out.
- vii. A form for placing orders that allows site users to request services.

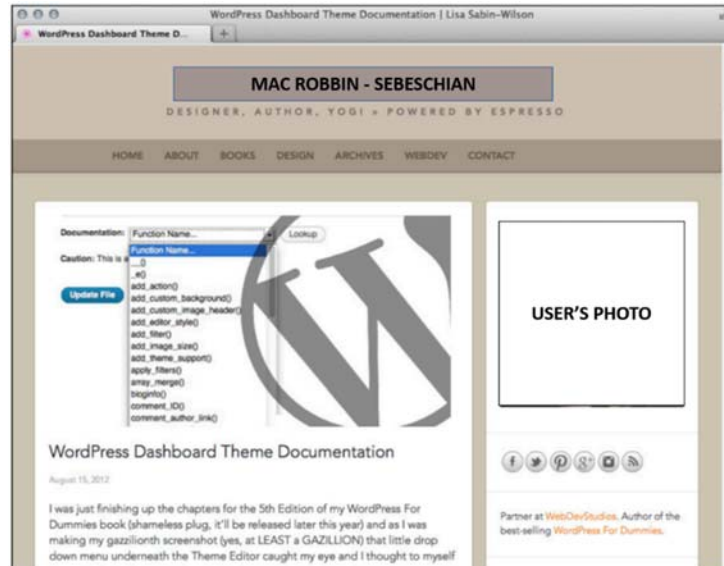


Figure 1: Represented the blog page of the Usersebeschian.com/

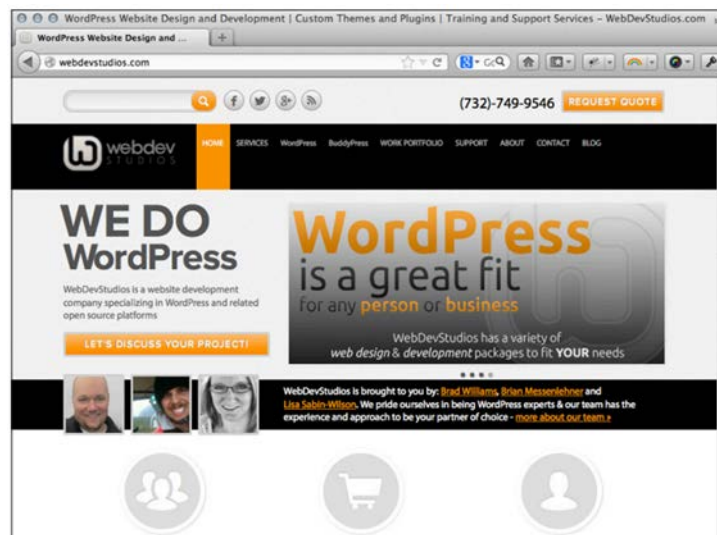


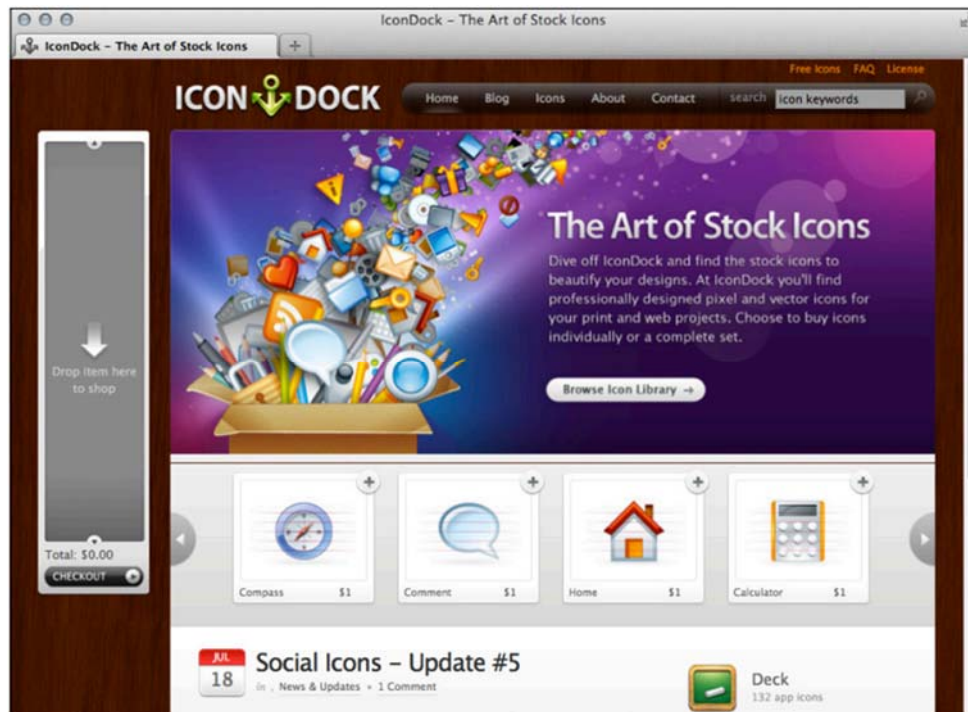
Figure 2: Illustrated my business website is powered by WordPress.

## Using WordPress as a Content Management System

The phrase CMS, or content management system, is one that is often used in the WordPress community. You use WordPress to manage your material by routinely posting and amending it, whether you operate a blog, a website, or both. WordPress rose to prominence as the most widely used blogging software on the internet after its first release in 2003. This is still true, but as WordPress development has advanced over time, it has transformed from a blogging platform into a fully functional content management system that enables you to publish a wide variety of content kinds to the web with a minimum of technical knowledge. WordPress is regarded as a web-based management system for content since it can be installed on a web server and is accessible via a web address to access the back-end settings and dashboard [3].

You may be wondering what makes a blogging platform different from a web-based management system for content because both let you post material online. Others claim that it's merely an issue of semantics since the two appear to be equivalent. Using a single WordPress installation to quickly publish various kinds of content is referred to as a content management system in the WordPress community. You may create and design a website that has a variety of content formats in addition to blogs, such as:

- a. **E-commerce:** Create a shop on your website where you may sell your goods and services. Figure 3 depicts the website Icon Dock (<http://icondock.com>), an excellent illustration of how WordPress is utilized as an online shop for selling goods [4].



**Figure 3:** Illustrated the Icon Dock is a website that uses WordPress to power its online storefront.

- b. **Photo gallery or portfolio:** Build and post picture galleries or an online portfolio, for example, of your design or photography work.

- c. **Discussion forum:** Create a forum on company website where users may start new conversations and join in on those that have already started, all while discussing subjects of mutual interest.
- d. **Social community:** On your WordPress website, establish an integrated social community that enables users to create profiles, groups, and forums and engage in social interaction with other users.
- e. **Small business:** Make a complete website for your company with static pages for material that doesn't change too frequently (FAQ pages, terms of service, and sales pages, for example). WordPress enables you to have both; you may choose to have a blog on your company website or not.
- f. **Forms:** To enable your visitors to contact you directly from the pages on your domain, create and add forms on your website. You may run surveys to get feedback from your readers and/or customers using forms as well as email communication and sales tools.
- g. **Social media integration:** Using various WordPress plugins and strategies, collect the stuff that you post on Twitter or Facebook and include it into your website.

The list above is only an example of the many types of information that can be published and managed using WordPress as a content management system (CMS) rather than simply as a blogging platform. Check out for more individual incidents of websites using WordPress as a content management system. In other circumstances, like when dealing with e-commerce and social communities, you need to install specific plugins, or scripts, that expand the feature set of the WordPress programme in the interest of incorporating these various content kinds on your website. Also, in certain circumstances, such as discussion groups and picture galleries, you must take these various information kinds into consideration when designing your WordPress theme. To do this, utilise template tags, CSS, and HTML. This book's third part demonstrates how to design WordPress themes and templates and offers terrific suggestions for tools and plugins you can use to add various functionality and content kinds to your WordPress-powered website [5].

### Discovering the World of WordPress Themes

WordPress themes constitute an only collection of files, referred to as templates, which control the appearance and essential features of your website. There are literally tens of thousands of complimentary WordPress themes that you may choose from. The official Themes Directory for WordPress may be found at <http://wordpress.org/extend/themes>. as Figure 4 depicts.

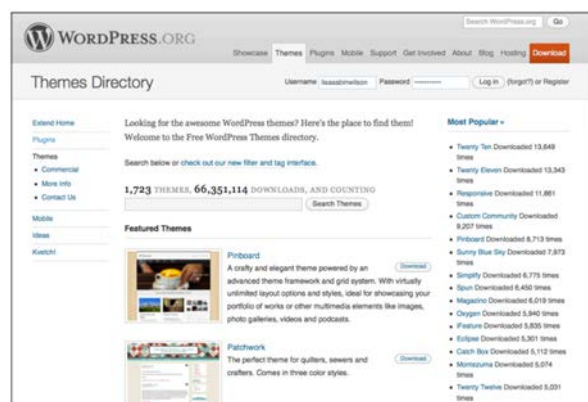
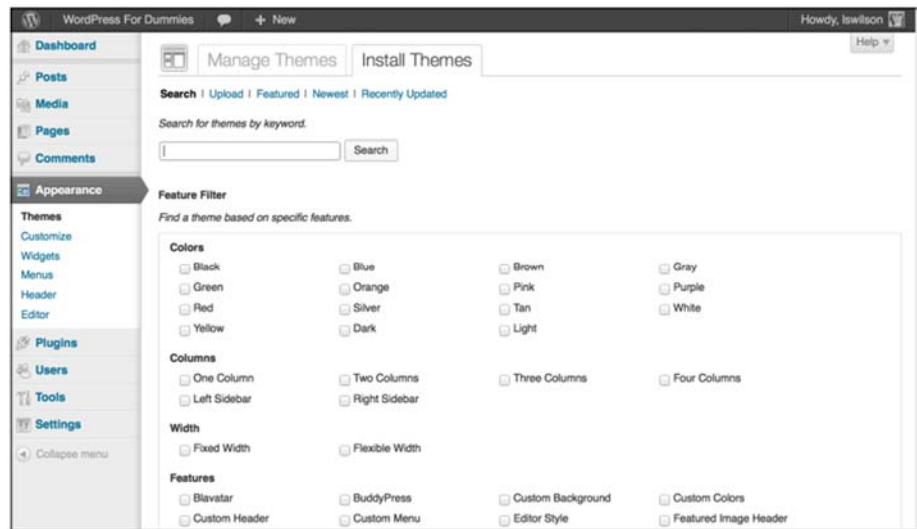


Figure 4: Illustrated the official WordPress Themes Directory.

Also, from the conveniences of your own WordPress Dashboard, you can explore, download, and install free WordPress themes. By selecting Cosmetic Themes and then tapping the Install Themes option in your Dashboard, as shown in Figure 5, you may access all the templates that you discover in the official Freebie Themes Directory [6].



**Figure 5: Illustrated the Browse thousands of free WordPress themes from your Dashboard.**

The official WordPress directory only contains themes that have been thoroughly examined, assessed, and authorised for inclusion. With the support of our theme evaluation, you can rest easy knowing that the theme you're using complies with WordPress's guidelines for excellent design. You and I haven't even met, yet I already know something about you as a result of you're reading this book. It's conceivable that you'll uncover the theme you're searching for in the Free Themes Directory. You wish to gain the abilities essential to design ones own WordPress theme by studying and employing those talents. Starting with free WordPress themes, particularly those from the official WordPress Free Theme Directory, is a terrific idea. The free themes inside this directory include with all the common functionality that customers assume from themes, making them a great place to start learning. I did say that, you overheard me! Pick up one of those free themes from the directory, examine the code within, learn from it, and then apply it to themes you make for yourselves, your acquaintances, or your customers. The WordPress community, open source, and the GPL (General Public License), which WordPress and its themes and plugins are distributed under, all encourages you to duplicate other people's work, which is often remarked upon see the "Open source and the GPL" sidebar for more information.

### Checking Out Premium WordPress Themes and Frameworks

Not every WordPress theme you come across have been free; in other words, not all WordPress themes are made equally. Software with a GPL licence, such as WordPress and its associated plugins and themes, is not necessarily free in terms of cost. A premium theme market has developed within the WordPress community over the last few years, with designers and coders offering high-quality themes and continuing support for their usage for a cost that varies from \$50 to \$300 per theme, depending according to which theme you select. Several of the companies that sell premium themes create unique themes they referring to as frameworks. Frameworks are

basically fully-featured WordPress themes that can be used to build an endless number of independent themes since they are designed and developed to serve as a parent theme. This speeds down the development of WordPress themes. You may go there now to read more about parent and child themes, or save the keywords "parent/child themes" in the back of your mind knowing that you will return these same ideas later in this book. I explore parent and child themes in great detail. [7].

Premium themes and frameworks enable you an easy method to use WordPress to develop a beautiful website fast for yourself, your relatives, and your customers at a cheaper cost than it would cost to pay someone to design and build a bespoke theme for you. Nevertheless, since the theme was designed by another person, you are only able to use the features and functionality that they included. Paid themes also have limits. If you wish to add more functionalities, you may need to make some changes to the template files' source code.

There are times when writing your own code from scratch is better than learning someone else's, even when learning your own code is easier. As soon as you feel comfortable developing your own theme, the choice is yours. <http://wordpress.org/extend/themes/commercial> offers a respectable selection of premium themes for the WordPress platform. The list of well-known theme frameworks that follows is up to date.

- a. Themes Builder: <http://ithemes.com/purchase/builder-theme>
- b. StartBox: [www.wpstartbox.com](http://www.wpstartbox.com)
- c. Hybrid: <http://wordpress.org/extend/themes/hybrid>

Then after you're up and running, be sure for the lowdown on managing content and for more about FTP and different web browsers.

### **Understanding WordPress Requirements**

You are introduced to the fundamental prerequisites in this chapter before you can install WordPress on a web server. I walk you through the steps of registering a domain name, investigating web hosting possibilities, and choosing a strategy for various WordPress projects in terms of bandwidth requirements and available hard drive space. Each customer has different demands for web hosting, based on the kind, extent, and size of the WordPress websites you create for them. This chapter assists you in considering each of these aspects to choose the appropriate hosting environment for the task.

### **Establishing Your Domain**

The buzz has been read. You are aware of the gossip. You've seen the glitzy WordPress-powered websites. So where do you even begin? Making a choice on a domain name and then acquiring the registration of that name via a domain registrar, a business that buys and manages domain names, are the initial stages in installing and trying to set up a WordPress website. A domain name is the distinctive web address that you put into the address bar of your web browser to access a particular website, such as [wordpress.org](http://wordpress.org) and [google.com](http://google.com). Since no two DNS-servers can be the same, I stress unique. You cannot have the desired domain name because someone else has already registered it. In light of this, it can take some time for you to select a domain name that isn't already used. [8].



## Understanding domain name extensions

Take your desired extension into account while registering a domain name. The top-level domain (TLD) extension is the .com, .net, .org, .info, .tv (for video), .fm (for audio), .co, or .biz that you see appended to the end of any domain name. A second level is a subdomain or subfolder within the top-level domain, which is the name of the website's primary domain. For instance, Wiley.com is the company's primary top-level domain, whereas onlinelibrary.wiley.com is the location of Wiley's Online Library. You may choose the domain extension you want when you register a domain name.

Just because you registered your domain as a .com extension doesn't imply that someone else already has or cannot get the exact same domain name with a .net extension. Hence, if you register MyDogHasFleas.com and it becomes very famous among readers who have dogs with fleas, someone else may go ahead and register MyDogHasFleas.net and start a similar website in an effort to capitalise on the success and traffic of your website. If you wish to avoid this issue, you may register your domain name with every extension that is offered. I own both <http://lisasabin-wilson.net> and <http://lisasabin-wilson.com>, which is the domain name for my own website.

## Considering the cost of a domain name

Depending on the registrar service you choose and the options you choose for your domain name even during registration process, such as privacy choices and search engine submission services, the cost of establishing a domain may range from \$10 to \$30 each year. As soon as the renewal time approaches in a year, two years, five years, or whatever many years you decide to register your domain name for, you must pay this price. You may choose how long to keep your domain registered for, although if you intend to use it for a while, most registrars will offer you a little reduction on the cost if you keep it for more than a year. Most registrars allow you to sign up for something like an auto-renew service that will renew your domain name on your behalf and charge the associated credit card. A few months in advance, the registrar emails you a notice that your registration has to be renewed. If you don't have auto renew set up, you must manually restore your domain name before it expires by logging into your registrar account.

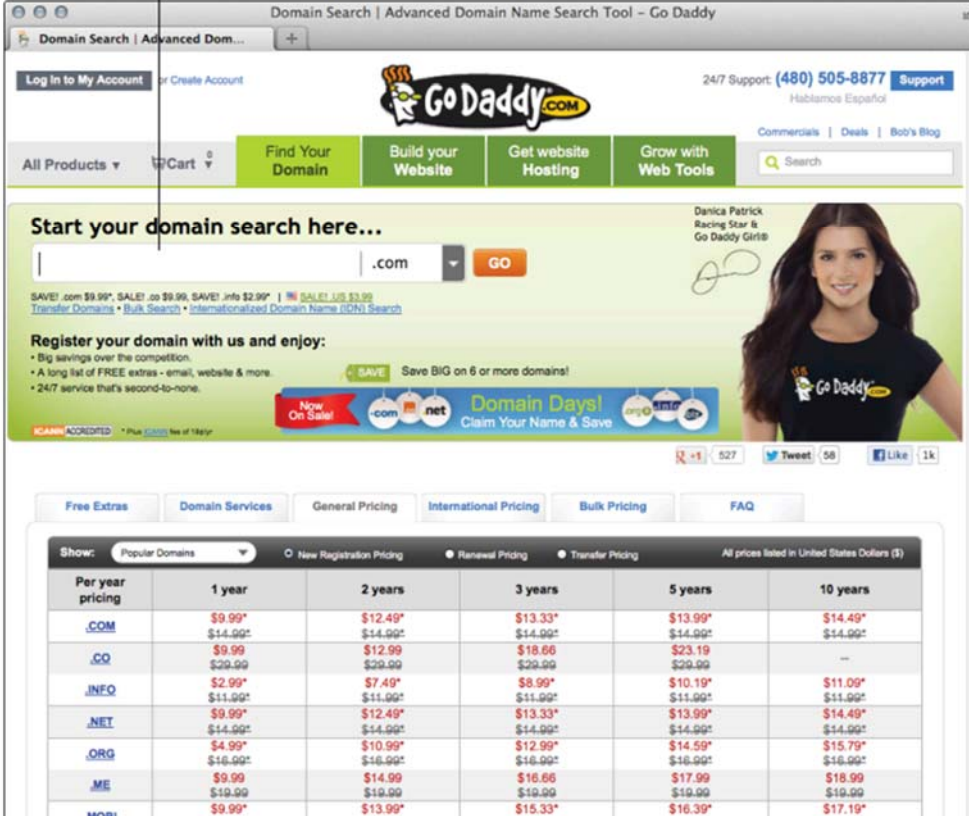
## Registering your domain name

The Internet Corporation for Assigned Names and Numbers confers certification and approval to domain registrars (ICANN). Despite the fact that there are hundreds of domain registrars, the ones on the list below are well-liked due to their history in the sector, affordable price, and range of services they provide in addition to registering a domain name such as web hosting and web analytics builders:

- a. GoDaddy.com: <http://godaddy.com>
- b. Register.com: <http://register.com>
- c. Network Solutions: <http://networksolutions.com>
- d. NamesDirect.com/Dotster: <http://namesdirect.com>

Nowadays, registering a domain name is arguably the simplest and most affordable process via GoDaddy.com, as shown in Figure 6. GoDaddy.com now offers domain name registration beginning at \$9.99 a year as of the time of this writing.

Enter domain name to check availability.



The screenshot displays the GoDaddy.com domain search tool. At the top, there's a navigation bar with 'Log In to My Account' and 'Create Account' options. The main header features the GoDaddy logo and contact information: '24/7 Support: (480) 505-8877' and 'Hablamos Español'. Below this, there are several menu items: 'All Products', 'Cart', 'Find Your Domain', 'Build your Website', 'Get website Hosting', and 'Grow with Web Tools'. A search bar is prominently displayed with the text 'Start your domain search here...' and a dropdown menu showing '.com'. A 'GO' button is next to the search bar. Below the search bar, there are promotional banners for 'Domain Days!' and 'Save BIG on 6 or more domains!'. A table of domain pricing is visible at the bottom, showing prices for various domains like .COM, .CO, .INFO, .NET, .ORG, and .ME for different terms (1, 2, 3, 5, 10 years).

Per year pricing	1 year	2 years	3 years	5 years	10 years
.COM	\$9.99*	\$12.49*	\$13.33*	\$13.99*	\$14.49*
.CO	\$9.99	\$12.99	\$18.66	\$23.19	---
.INFO	\$2.99*	\$7.49*	\$8.99*	\$10.19*	\$11.09*
.NET	\$9.99*	\$12.49*	\$13.33*	\$13.99*	\$14.49*
.ORG	\$4.99*	\$10.99*	\$12.99*	\$14.59*	\$15.79*
.ME	\$9.99	\$14.99	\$16.66	\$17.99	\$18.99
.MUSIC	\$9.99*	\$13.99*	\$15.33*	\$16.39*	\$17.19*

**Figure 6: Illustrated the GoDaddy.com provides an easy, low-cost way to register a domain name.**

No matter where you choose to register your domain name, here are the general steps to do so:

**a. Decide on a domain name**

Here, a little forethought is required and many individuals consider a domain name to be a brand that identifies their blogs or websites. Consider several names for your website, and then go on with your strategy.

**b. Verify the domain name's availability**

Enter the URL of the domain registrar of your choice in your computer browser. Find the area on the registrar's website where you may input the domain name; it's usually a little text box. Check Figure 6 to check whether it's accessible. Try a.net or.info domain name if a.com is not available.

**c. Purchase the domain name**

To buy the name with your credit card, according to the domain registrar's instructions. Provide a valid email address while registering since you will get an email verifying your purchase once the checkout process is finished. You must establish a hosting account after finishing these procedures, which I discuss in the next section. You may sign up for hosting services from a few domain registrars, but you are not required to utilise them. If you look around, you may often locate hosting services for less money than most domain registrars charge. Look out a few of the web hosts I

mention in the part of this chapter that is titled "Finding a host that delivers WordPress functionality."

## Finding a Home for Your Website

Before you start using WordPress, you must to choose a web host for your domain after registering it. The many capabilities that web hosting companies often give with a basic hosting account are covered in the sections that follow, along with some suggestions for hosts that also support the WordPress platform. I also provide you some advice on how to calculate how much hard disc space and bandwidth you would want for your website [9].

### Examining what services web hosts offer

A web host is a company, organization, or person that offers web-server bandwidth and server space for file transfers to website owners. Unless you're lucky enough to know an individual, who is ready to provide you server bandwidth and disk space for free, web hosting services often charge a monthly or yearly price. While prices vary from host to host, you may start off with decent web hosting for \$3 to \$10 per month. Imagine your web host as a parking garage where you pay to leave your vehicle. You may keep your vehicle in the garage (hard-drive space). Even a driveway is provided by the host so that you and other guests may access and exit your vehicle (bandwidth). Nevertheless, unless you're prepared to pony up a few additional dollars for the repair, the garage owner won't fix your rock-in' sound system (WordPress or any other third-party software package) that you've installed.

Hosting services generally provide (at least) these services with your account:

- a. **Hard drive space:** Nothing about this is more sophisticated than your computer's hard disc. A certain amount of files may fit on each hard drive's capacity, or available space. A hard disc with an 80GB (gigabyte) capacity can only store quite as much data. The same idea applies to the restricted hard drive space that comes with your hosting service. The most file size you are authorised to have is 10GB if your web host gives you that much hard disc space. You must update your physical limitations if you desire extra hard disc space. The majority of web servers offer a way for you to increase your allocation. You don't need a tonne of hard disc space for a brand-new self-hosted WordPress website. 3–5 GB of storage space is an excellent place to start. You may ask your shared hosting for a space increase if you discover that you will soon require more space. Websites that use huge files, such video, music, or picture files, often have access to more hard disk drive space than websites that don't. While creating your hosting account, keep this in mind. Making plans now can help you avoid some future hassles.
- b. **Bandwidth (transfer):** The quantity of data that may be sent from a location to another in a certain length of time typically only a second or two is referred to as bandwidth. To put it simply: I reside in a rural area that is essentially inaccessible. My home receives its water from a personal well that is hidden discreetly in the rear. Water is delivered to my home through pipes that go between the well and my home. Everyone can take lengthy, hot showers at my house since the pipes allow for an unimpeded water flow, and I can work on dishes and laundry at the same time. I'm lucky!

The available bandwidth for your hosting service follows the same principle. Every web hosting business has distinct bandwidth restrictions on the accounts it provides. The



bandwidth is simply the connection that allows data to go from my well to your computer and display on your monitor when you wish to visit my website in your browser window. Similar like the pipe leading to my well, the bandwidth limit can only store so much water until it hits its capacity and can no longer transport water from the well. The amount of bandwidth your web server permits for your account determines the size of your bandwidth pipe; the higher the number, the larger the pipe. A pipe is smaller with a 50MB bandwidth restriction than one with a 100MB limit. The amount of bandwidth most web servers include in their packages is rather considerable. Bandwidth is measured in gigabytes, much as hard disc space. For most websites with blogs, a bandwidth allowance of 10 to 50 GB is considered to be a decent level [9].

- c. **Domain e-mail with web mail access:** The host allows you to have an e-mail address that has your own, unique domain name.
- d. **File Transfer Protocol (FTP) access:** FTP gives you the ability to transfer files from your computer to your web-hosting account, and vice versa.
- e. **Comprehensive website statistics:** View detailed information on the traffic that your website receives on a daily, weekly, monthly, and annual basis.
- f. **MySQL database(s):** This is the database system that WordPress uses to store your data.
- g. **PHP:** PHP is the programming language that WordPress is built on.

You should search for a host that offers the current suggested, minimal needs necessary to operate the WordPress software on their hosting account since you plan to run WordPress on your web server. These requirements are:

- a. PHP version 5.2.4 (or greater)
- b. MySQL version 5.0 (or greater)

Checking the FAQ part of the host's website, if it has one, is the simplest approach to determine if they comply with the basic standards. If not, locate the hosting company's contact details and send an email seeking details on the services it offers [10], [11].

## REFERENCES

- [1] N. S. Ab Ghani, M. Kassim, and A. H. Awang, "Web design structure with wordpress content management for sports centre booking system," *Indones. J. Electr. Eng. Comput. Sci.*, 2020, doi: 10.11591/ijeecs.v19.i3.pp1643-1653.
- [2] H. J. Lee, "Web Design Methodology for Wordpress Site based on Wordpress Theme Customization," *J. Korea Contents Assoc.*, 2016, doi: 10.5392/jkca.2016.16.02.277.
- [3] L. Kemal, KUNTO IMBAR NURSETYO, S.Pd,M.Pd., and Drs. Erry Utomo, M.Ed, Ph.D., "Development Interactive videos as Learning Objects on Web Design Courses in the Education Technology at the State University of Jakarta," *J. Pembelajaran Inov.*, 2020, doi: 10.21009/jpi.031.03.
- [4] H. J. Lee, "Development of Web UX Pattern System for Wordpress Service, and Design Suggestion for Wordpress Theme Filtering Service 9," *Int. J. Contents*, 2017.

- [5] J. Avila, K. Sostmann, J. Breckwoldt, and H. Peters, "Evaluation of the free, open source software WordPress as electronic portfolio system in undergraduate medical education," *BMC Med. Educ.*, 2016, doi: 10.1186/s12909-016-0678-1.
- [6] E. Januarisman and A. Ghufron, "Pengembangan Media Pembelajaran Berbasis Web Mata Pelajaran Ilmu Pengetahuan Alam Untuk Siswa Kelas VII," *J. Inov. Teknol. Pendidik.*, 2016, doi: 10.21831/jitp.v3i2.8019.
- [7] T. Esposito, *WordPress for Dummies*, 7th edition. 2016.
- [8] Rafi Ardo, Mohamad Hasanudin, Afiat Sadida, and M. A. F. Farizi, "Build A Web-Based E-Commerce Information System Using Content Management System (CMA) at Djuwariyah Accountant Service Office," *Ilomata Int. J. Manag.*, 2020, doi: 10.52728/ijjm.v1i2.54.
- [9] N. Kumar, A. Kalia, and R. Kumar, "Evaluation of webpages performance W.R.T UI/UX developed using different frameworks," *Int. J. Eng. Adv. Technol.*, 2019, doi: 10.35940/ijeat.8064.088619.
- [10] B. H. Susanti, "Penggunaan Media Online Dalam Proyek Pembuatan Bahan Ajar Berbasis Web Pada Mata Kuliah Zoologi Vertebrata," *Edusains*, 2019, doi: 10.15408/es.v11i1.7728.
- [11] I. A. Slipukhina, T. V. Gedenach, and V. V. Olkhovyk, "Creating An Informational Website For Physics Academic Course: Web Design Specifics," *Inf. Technol. Learn. Tools*, 2017, doi: 10.33407/itlt.v6i2.1812.

## CHAPTER 2

# INSTALLING WORDPRESS ON YOUR WEB SERVES

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You need to have a strong foundation before diving into the realm of WordPress site design. This implies that you must have the most recent version of WordPress installed on you web server and be familiar with upgrading it when a new version of WordPress is released, which happens around once every 120 days. In order to provide you with a strong foundation upon which to build, this chapter guides you throughout installing WordPress properly, step by step. With that foundation in place, you can focus more on your design and coding tasks and less on any server- or back-end-related problems that can arise if you don't follow the first installation instructions. The release timetable of WordPress development, updates, and nightly builds, or bleeding edge versions, which are provided ahead of official releases, must be understood if you want to design and create WordPress themes for yourself, for release to the public, or for paid customers. You may find the tools you need in this chapter to keep up with WordPress development [1].

### Installing WordPress

Before you're ready to install WordPress, you need to do the following:

- a. Purchase the domain name registration for your account.
- b. Obtain a hosting service on a web server for your site.
- c. Establish your hosting account username, password, and File Transfer Protocol (FTP) address.
- d. Acquire an FTP client for transferring files to your hosting account.

With scripts like Fantastic, the most well-known screenplay installer accessible, several web providers provide a one-click installation method for WordPress. If this applies to you, all you are required to do is follow the instructions given by your web host (and jump forward to the part below on discovering WordPress release cycles). WordPress installation procedures for manual installation on a web server are provided in this section. Here's where it gets very complicated because if you have to manually install WordPress, you'll be putting WordPress's renowned five-minute implementation to the test. See if you can make it to the five-minute mark by setting your watch the renowned five-minute duration of the project takes into account the time needed to install only the program [2], [3]. It excludes the resources duration to get and set up your web hosting company, register a domain name, purchase, install, configure, and learn the basics of using the FTP software. These are the general methods to install WordPress without further ado:

- a. Get the latest version of the WordPress software at <http://wordpress.org/download>.

WordPress gives you two compression formats for the software: .zip and tar.gz. I recommend getting the Zip file because it's the most common format for compressed files.

- b. Download the WordPress software to your computer and decompress (or unpack or unzip) it to a folder on your computer's hard drive.

You can use a free web application such as WinZip ([www.winzip.com](http://www.winzip.com)) to decompress the file.

- c. Set up a MySQL database so that it's ready to accept the installation.
- d. Upload (transfer) the WordPress files from your hard drive to your web-server account.
- e. Connect the WordPress software you uploaded to the MySQL database.

### Setting up the MySQL database

The PHP/MySQL framework used by the WordPress software gives you everything you need to build your own website and generate your own content continuously without having to be acquainted with creating such pages. In a nutshell, a MySQL database in your online environment houses all of your stuff, including your choices, posts, opinions, and so on.

A request is sent to your network each time a visitor accesses your website to view your content. This request is received by the PHP programming language, which then retrieves the required data from the MySQL database and displays it to your visitors thru the their web browsers [4].

The way each web host gives you access to set up and handle the MySQL database(s) for your account varies. I make use out of panel, a well-liked hosting interface, in this part. The underlying principles remain the same regardless of your host's focus is given; it's only possible that it differs.

To set up the MySQL database for your WordPress site with cPanel, follow these steps:

- a. Log in to your hosting account administration interface with the user-name and password assigned to you by your web host.
- b. Locate the MySQL Database Administration icon in your cPanel.  
In cPanel, click the MySQL Databases icon.
- c. Enter a name for your database in the New Database text box.

Be sure to make note of the database name because you need it when installing WordPress.

I typically give my database an username that I'll remember easily in the future. This procedure is very useful if you use your account to operate several MySQL databases. If I give this database a name like "WordPress" or "Weblog," I can be quite certain that when the time comes to enter my database to make any configuration changes a year from now, I will know precisely which one I need to deal with [5].

- d. Click the Create Database button.

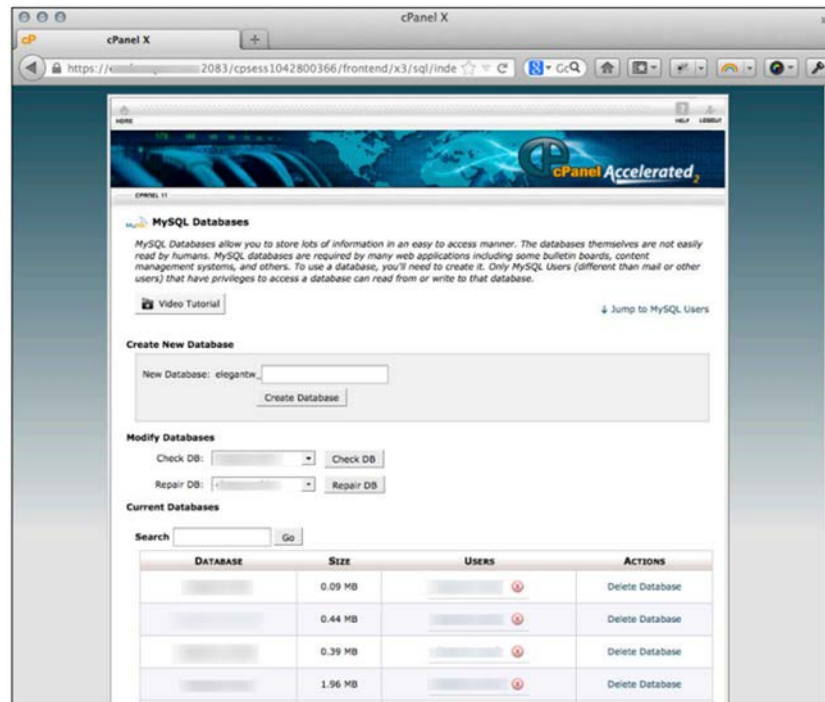
A message appears, confirming that the database has been created.

- e. **Click the Go Back link or the Back button on your browser toolbar.**

This returns you to the MySQL Databases page where your newly created database is listed under Current Databases.

- f. **Scroll down the page to the Add New User area, enter a username and password for your database, and then click the Create User button.**

A confirmation notice indicating the username was established using the password you provided displays. Make sure your password is difficult for cunning hackers to guess for extra security. cPanel provides you with a helpful tool to build a password using a relatively safe mix of numbers, characters, and symbols that makes it almost impossible to decipher during the database design process [6], [7].



**Figure 1: Represented the MySQL Databases page in cPanel.**

The database name from step 3 and the associated login and password must be written down precisely for ease of reference. Before formally installing WordPress on your web server, you'll need these. Make sure you have them available, whether you write them onto a piece of paper or just copy and paste things into a text editor.

- g. Click the Go Back link or the Back button on your browser toolbar.**

This returns you to the MySQL Databases page.

- h. In the Add Users to Database section, choose the user you just set up from the User drop-down list and then choose the database from the Database drop-down list.**

The MySQL Account Maintenance, Manage User Privileges page appears.

- i. Select the All Privileges check box to assign user privileges.**

Because you're the administrator (owner) of this database, make sure you assign all privileges to the new user you just created.

- j. Click the Make Changes button.**

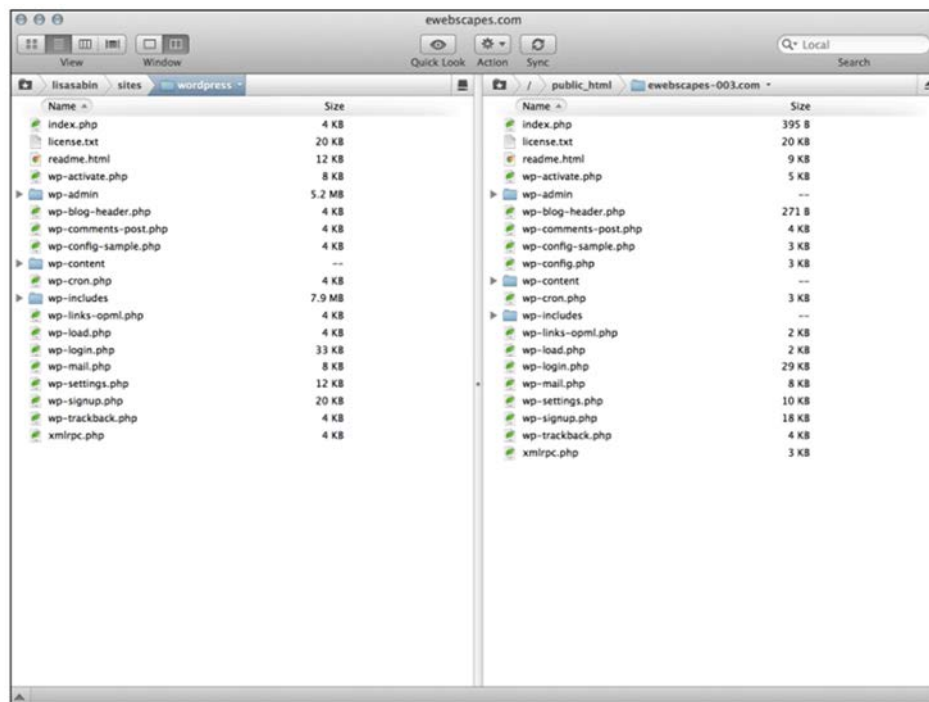
A page opens with a confirmation message that you've added the selected user to the selected database.

- h. Click the Go Back link to return to the MySQL Databases page to see your new MySQL database and user listed on the MySQL Databases page.

### Uploading the WordPress files

Go back to the location on your computer where you unzipped the WordPress software that you downloaded beforehand in order to transfer the WordPress files to your server. The WordPress files from my local computer are shown on the left side of Figure 2, and the WordPress files on my web server are shown on the right side of the picture. Connect to your web server using your FTP program, then upload each of these files to the admin area of your hosting account [8].

Ask your hosting company if you are unsure of what your root directory is. Every hosting company has a unique arrangement. Some of my customers have a root directory in the httpdocs folder, but my root directory on my web server is the public html folder. The solution mostly relies on the arrangement used by your hosting company. Ask if you're unsure.



**Figure 2: Illustrated the Using an FTP client makes file transfers easy.**

Here are a few things to keep in mind when you upload your files:

- a. **Upload the contents of the /WordPress folder to your web server not the folder itself:**

Most FTP client software lets you select all the files and drag and drop them to your web server. Other programs have you highlight the files and click a Transfer button.

- b. **Choose the correct transfer mode:**

File transfers via FTP have two forms: ASCII and binary. Most FTP clients are configured to AutoDetect the transfer mode. Understanding the difference as it pertains to this WordPress installation is important so that you can troubleshoot any problems you may have later:

- i. Binary transfer mode is how images (such as JPG, GIF, BMP, and PNG files) are transferred via FTP.
- ii. ASCII transfer mode is for everything else (text files, PHP files, JavaScript, and so on).

It's generally a good idea to leave your FTP client's transfer mode set to AutoDetect. Nevertheless, you should retransfer the files using the proper transfer method if you have problems with how those files load on your website.

**c. You can choose a different folder from the root.**

You are not necessary to move the files to your web server's root directory. WordPress may be set up to operate on a subdomain or in a separate account folder. You would move the WordPress files into a /blog folder, for instance, if you wanted your blog's URL to be <http://yourdomain.com/blog>.

**d. Choose the correct file permissions.**

File permissions inform the web server how to manage these files on your server and whether they may be written to or not. PHP files typically need a permission of 666, while file folders typically require a permission of 755. The majority of FTP clients allow you to verify and, if necessary, modify the file permissions. Generally, your FTP client's menu settings have the ability to alter file permissions. Several hosting companies run their PHP programs in safe mode, which is a more secure configuration. You must set the PHP files to 644, if that is the case with your server. Ask your hosting company what permissions you need to specify for PHP files if you're unclear [9].

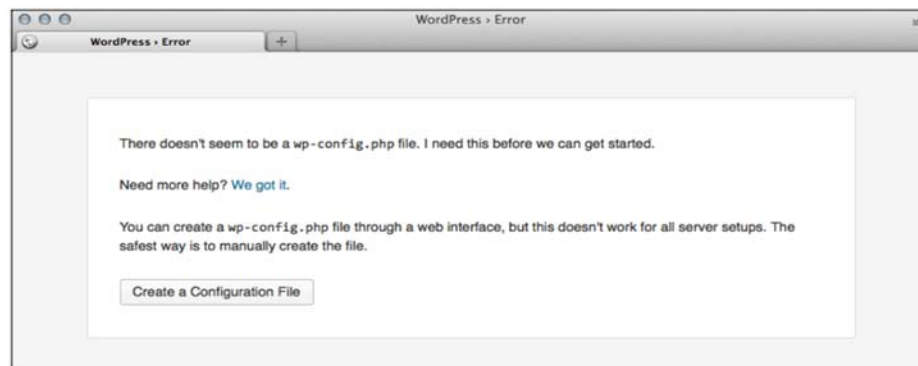
### Running the install script

The final step in the installation procedure for WordPress is connecting the WordPress software you uploaded to the MySQL database. Follow these steps:

- a. Type the following URL in the address box of your browser, replacing yourdomain.com with your own domain name:

<http://yourdomain.com/wp-admin/install.php>

Be careful to provide this in the URL for the install script if you installed WordPress somewhere other than the root directory of your account. You would direct your browser to the following URL to launch the installation if, for example, you moved the WordPress software files to a /blog folder: <http://yourdomain.com/blog/wp-admin/install.php>. If everything went according to plan, you would see the Figure 3 message.



**Figure 3: Illustrated the WordPress prompts you to create a configuration file.**



**b. Click the Create a Configuration File button**

The Welcome to WordPress page, which gives you the information you need to proceed with the installation, opens.

**c. Click the Let's Go button at the bottom of the page.**

Fill in the following boxes, as shown in Figure 4, using the database name, username, and password that you previously stored (see the "Setting up the MySQL database" section earlier in this chapter).

**Database Name:** Enter the database name that was used when the MySQL database was established prior to this installation. You must either specify the database name or the database identifier with your hosting account username added since hosts' setups vary. You would type it in this text field if, for instance, you called your database wordpress. You might also specify username wordpress instead of username if your host needs you to add the database name alongside your hosting account username. I typed lisasabin\_ wordpress since that is my username.

**User Name:** In the Username field, enter the username that you chose when you first created the MySQL database. You may need to add this username to your hosting account username depending on what your host wants [10].

**Password:** Enter the password that you used to create the MySQL database. Your hosting account username doesn't need to be followed by the password in this case.

**Database Host:** Usually, localhost should be left as this field's value. Some hosts have various hosts specified for the MySQL database server depending on their setup. Contact your hosting company to get the host of the MySQL database if localhost doesn't work.

**Table Prefix:** Leave this field set to wp\_.

The screenshot shows the 'WordPress - Setup Configuration File' window. At the top is the WordPress logo. Below it, a message reads: 'Below you should enter your database connection details. If you're not sure about these, contact your host.' The form contains five rows of input fields with labels and descriptions:

- Database Name:** Input field contains 'wordpress'. Description: 'The name of the database you want to run WP in.'
- User Name:** Input field contains 'username'. Description: 'Your MySQL username'
- Password:** Input field contains 'password'. Description: '...and your MySQL password.'
- Database Host:** Input field contains 'localhost'. Description: 'You should be able to get this info from your web host, if localhost does not work.'
- Table Prefix:** Input field contains 'wp\_'. Description: 'If you want to run multiple WordPress installations in a single database, change this.'

A 'Submit' button is located at the bottom left of the form area.

**Figure 4: Illustrated the Enter the database name, username, and password**

Leaving the database table prefix at the default of wp\_ is acceptable practise. However, if you want



a little bit more security with your WordPress installation, change the default database table prefix to something different. This is because there are people online who try to hack WordPress databases, and one of the primary things they look for is the database table prefix that is set by default. If you choose a special prefix, it will be hard for anybody to access your database without knowing it. I might set mine to a value similar to `lswwp_`, for instance. While not required, this approach is advised for a more security WordPress installation.

**d. After you have all that information filled in, click the Submit button.**

You see a notification that reads, "All right, and sparky! This portion of the installation is complete. Now, WordPress and your database can interact. It's now time to execute the installation if you're ready.

**e. Click the Run the Install button**

You see another welcome page with a message welcoming you to the famous five-minute WordPress installation process, as shown in Figure 5.

The screenshot shows the WordPress installation interface. At the top, there's a browser window titled "WordPress - Installation". The main content area has the WordPress logo and a "Welcome" heading. Below the logo, there's a paragraph of text: "Welcome to the famous five minute WordPress installation process! You may want to browse the [ReadMe documentation](#) at your leisure. Otherwise, just fill in the information below and you'll be on your way to using the most extendable and powerful personal publishing platform in the world." This is followed by a section titled "Information needed" with a sub-header: "Please provide the following information. Don't worry, you can always change these settings later." The form contains several input fields: "Site Title" (empty), "Username" (pre-filled with "admin"), "Password, twice" (two empty fields), and "Your E-mail" (empty). There is also a "Strength indicator" button and a small "Hint" text: "Hint: The password should be at least seven characters long. To make it stronger, use upper and lower case letters, numbers and symbols like ! \* ? \$ % ^ & ; .

**Figure 5: Illustrated the Information is needed to finish the WordPress installation.**

**f. Enter or change the following information:**

**Site Title:** Enter the title you want to give your site. The title you enter isn't written in stone; you can change it at a later date, if you like.

**Username:** This is the name you use to log in to WordPress. By default, the username is admin, and you can leave it that way. However, for security reasons, I recommend you change your username to something unique to you.

**Password, Twice:** Type your desired password in the first text box and then type it again in the second text box to confirm that you've typed it correctly. If the two versions of your

password don't match, WordPress alerts you with an error message. If you don't enter a password, one is generated automatically for you.

For security reasons (and so other people can't make a lucky guess), passwords need to be at least seven characters long with as many different characters in as many combinations as possible. Use a mixture of uppercase and lowercase letters, numbers, and symbols, such as! “ ? \$ % ^ &.

**Your E-mail:** Enter the e-mail address you want to use to be notified of administrative information about your website. You can change this address at a later date, too.

**Allow search engines to index this site:** By default, this check box is selected, which lets the search engines index the contents of your website and include your website in search results. To keep your website out of the search engines, deselect this check box [11].

**g. Click the Install WordPress button.**

All the tables in the database that hold the default data and your website are created by the WordPress installation tool using its magic. The login details required to access the WordPress Dashboard are shown by WordPress. Before you leave this page, write down this login and password. You may also copy it into a text editor like Notepad.

WordPress provides you an email with the login details and login URL once you click the Install WordPress button. If you are called away during this phase of installation, this material will come in useful. So feel free to answer the cellphone, boil some coffee, let the dog out, or take a quick 15-minute power nap. The email given to you has all the knowledge you need to properly log in to your WordPress website, just in case you manage to get preoccupied from the page showing your username and password.

**h. Click the Log In button to log in to WordPress.**

You may always get to the login page by typing your domain followed by the call to the login file (for example, <http://yourdomain.com/wp-login.php>) if you happen to lose it before pressing the Log In button.



**Figure 6: Illustrated that you know you've run a successful WordPress installation when you see the login page.**

When you view the login screen, as in Figure 6, you know the installation procedure is complete. If you run into any issues during this installation, have a look at Table 1; it addresses some of the issues that customers often encounter. Please provide the time that your watch indicates the installation will take. Five minutes, was it? Visit my site at <http://lisasabin-wilson.com> and let me know whether WordPress lived up to its reputation for having a five-minute installation process. I like to be inquisitive. When you view the login screen, you know your WordPress installation was successful. You're done, which is wonderful news! Did you anticipate a marching band? WordPress is still not very fanciful. Nonetheless, give it some time; if anybody can deliver it, it's the WordPress team.

**Table 1: Illustrated the Common WordPress Installation Problems**

Sr. No.	Error Massage	Common Cause	Solution
1.	Error Connecting to the Database	The host, username, password, or database name were entered incorrectly.	Reenter the database name, username, password, and host from your MySQL database after visiting it again.
2.	Headers Already Sent Error Messages	There was a syntax mistake in the wp-config.php file.	wp-config.php should be opened in a text editor. Just this text should be on the first line: Be sure that just those lines—not even white space—contain nothing else. Delete the modified file.
3.	500: Internal Server Error	Permissions on PHP files are set incorrectly.	Try setting the permissions (chmod) on the PHP files to 666. If that change doesn't work, set them to 644. Each web server has different settings for how it lets PHP execute on its servers.
4.	404: Page Not Found	The URL for the login page is incorrect.	Double-check that the URL you're using to get to the login page is the same as the location of your WordPress installation (such as <a href="http://yourdomain.com/wp-login.php">http://yourdomain.com/wp-login.php</a> ).
5.	403: Forbidden Access	An index.html or index.htm file exists in the WordPress installation directory	WordPress is a PHP application, so the default home page is index.php. Look in the WordPress installation folder on your web server. If an index.html or index.htm file is there, delete it

**REFERENCES**

- [1] M. Heap, “Installing WordPress,” in *Ansible*, 2016. doi: 10.1007/978-1-4842-1659-0\_3.
- [2] M. Hendriken, “Installing and Running WordPress: WAMP,” *Lynda*, 2016.
- [3] D. McDonald, “Comparing Python and Wordpress Assignments on a Raspberry Pi,” *J. Comput. Sci. Coll.*, 2018.
- [4] J. Westfall, “Installing an Open Source Software Product: WordPress,” in *Set Up and Manage Your Virtual Private Server*, 2021. doi: 10.1007/978-1-4842-6966-4\_8.
- [5] B. DUSABLON, “Responsive Performance Support With WordPress.,” *TD Talent Dev.*, 2014.
- [6] A. D. Scott, *WordPress for education. [electronic resource]: create interactive and engaging e-learning websites with WordPress*. 2012.
- [7] E. C. H. Failure and P. I. I. Assess, “Sleep Disturbances in Caregivers of Patients With,” *Spring*, 2007.
- [8] S. Leary, “Installing and Upgrading WordPress,” in *WordPress for Web Developers*, 2013. doi: 10.1007/978-1-4302-5867-4\_2.
- [9] J.-C. Ko, “Crypto Wallet Working on Low-cost 4G LTE Mobile Phone (video),” 2019. doi: 10.1145/3307334.3328591.
- [10] “Installing and Configuring WordPress,” in *Building Online Communities with Drupal, phpBB, and WordPress*, 2006. doi: 10.1007/978-1-4302-0106-9\_14.
- [11] M. Barkworth, B. Brandt, C. Dyreson, N. Cobb, and W. Pearse, “Symbiota2: Enabling greater collaboration and flexibility in mobilizing biodiversity data,” *Biodivers. Inf. Sci. Stand.*, 2019, doi: 10.3897/biss.3.37208.

## CHAPTER 3

### DISCOVERING WORDPRESS RELEASE CYCLES

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Discuss the idea of open-source software (OSS) and the fact that the majority of WordPress developers are volunteers who give their time and skills to the WordPress platform. Each major version of WordPress is the result of a collaborative effort in which periodically more than 300 developers have participated in some capacity. You may anticipate a new version of the WordPress software around three times every year, according to the publicly announced timetable for new releases, which is once every 120 days on average. I've been using WordPress since 2003, and throughout those 10 years, the WordPress engineering team has mostly adhered to that timetable, with a few sporadic outliers. WordPress often makes a public notice when it deviates from its 120-day guideline so that users are aware of what to expect and the anticipated release date [1].

The 120-day plan is subject to interruptions, which is common given that WordPress is developed entirely by volunteers. Just a small percentage of WordPress developers really get compensation, and those are individuals who work for Automatic, the organization responsible for the hosted WordPress.com service. The development of WordPress relies on volunteer developers carving out time in their commitments to work on the software on a timely basis since the development team is entirely volunteer-run. In general, they do, and you can anticipate fresh upgrades to WordPress often. Practically speaking, you should update your WordPress plugins at least three times a year, if not more.

#### Understanding why you need to upgrade regularly

The number of times you must update your WordPress installation over the course of a year shouldn't deter you. The WordPress platform's development team works tirelessly to enhance user experience and provide intriguing and enjoyable new features. With each new update, you discover better security and fresh tools you may utilise to enhance user interaction with your website. Each time a new version of WordPress is published, all website owners who use the platform must upgrade their installations for the reasons listed below:

- a. **Security:** Older WordPress versions are the most susceptible to phishing software and hacking attempts since they no longer get support. 99.99% of the time, complaints regarding WordPress security are the result of people utilizing an out-of-date version on their websites. Upgrade to the most recent version as soon as you can to ensure that you are running the most current and safe version.
- b. **New features:** You constantly discover fantastic new features and tools with major WordPress updates that enhance your experience, increase your effectiveness and productivity while managing your website, enhance the experiences of your visitors, and are delightful to use. (Major versus point releases is discussed in the chapter's sidebar.) You can always get the most recent and superior tools and features WordPress would have to offer by upgrading your WordPress installation.

- c. **Plugins and themes:** The majority of plugin and theme designers put a lot of effort into making sure their creations are current and consistent with the most recent WordPress version. As a result, keeping plugin and theme developers' goods compatible with the most recent WordPress version is difficult already without worrying about dealing with outdated WordPress versions. Use the most recent editions of both WordPress and your selected plugins and themes to ensure that the plugins as well as themes you use are up to date and don't disrupt any of the functionality on your site (for instance, they stop functioning or result in problems).

### Examining Release Cycles

Before it reaches your hands, the most recent WordPress installation has undergone multiple revisions, or versions, by the time you update to it. When you see it discussed in blogs and Twitter postings, you will at least have a rudimentary understanding of what is being discussed because of this section's explanation of how to acquire the most recent version of your website and the language used. The following are the procedures and terms used in the rollout of a new version of WordPress:

- a. **Alpha:** The initial stage of a new version is often the concept phase, during which developers solicit input from users, other developers, and members of the community. The alpha stage is when developers choose which features to add in the next release and create the project's blueprint and strategy. As new features are chosen, developers work on them and testers evaluate them until they reach the feature freeze, which marks the end of the development cycle and the beginning of the beta cycle, during which developers polish new features by having users test them and fixing bugs.
- b. **Beta:** This cycle is used to address bugs and other issues that testers may have found. Beta cycles may continue for four to six weeks, if not more. WordPress often publishes many beta versions with names like WordPress version 3.0 Beta, WordPress version 3.0 Beta 1, and so forth. This goes on until the engineering team determines that the program is prepared to go to the subsequent stage of the development cycle [2], [3].
- c. **Release candidate (RC):** When it is judged that the problems from the beta versions have been resolved and the versions is almost ready for the final release, it is given as a release candidate. Several iterations may sometimes be referred to as RC-1, RC-2, and so on.
- d. **Final release:** The development team releases the final version of the WordPress software once it has undergone thorough testing in a wide range of settings of all kinds—including browser systems, various web server configurations, and user experiences; when no significant bugs are reported; and when every one of the bugs from the alpha, beta, and RC phases have been fixed.

The WordPress development team begins starting at the alpha stage once a version is made available as a final release, getting ready to embark on the development cycle once more in preparation for the next significant version. A development cycle normally lasts around 120 days, but anything may happen within that time, from delays with developers to defects that have been extremely challenging and take more time than expected to address. According to legend, a cat that took a lot of time and attention all across the development cycle for version 3.0 caused a delay in the final release of many weeks.

## Keeping Track of WordPress Development

A WordPress project's development cycle may be easily tracked if you are familiar with its locations since the development team makes an effort to make the process clear. You may keep up by reading about the cycle in different places on the Internet, however you can also listen in on developer talks and, if you're feeling particularly motivated, join in and help out where you can.

You can keep up with what's happening in the world of WordPress development by reading blogs, commenting in live chats, attending development meetings, monitoring tickets, and reporting bugs, to highlight a few. You may use this list as a good starting point to learn more about each of these sources of information:

- a. **Make WordPress Core:** You may monitor and keep apprised of the developments of the WordPress software project as it unfolds by visiting the official blog of the WordPress development team at <http://make.wordpress.org/core/>, as shown in Figure 1. Agendas, timetables, minutes from workshops, and debates related to the development cycles may all be found here.

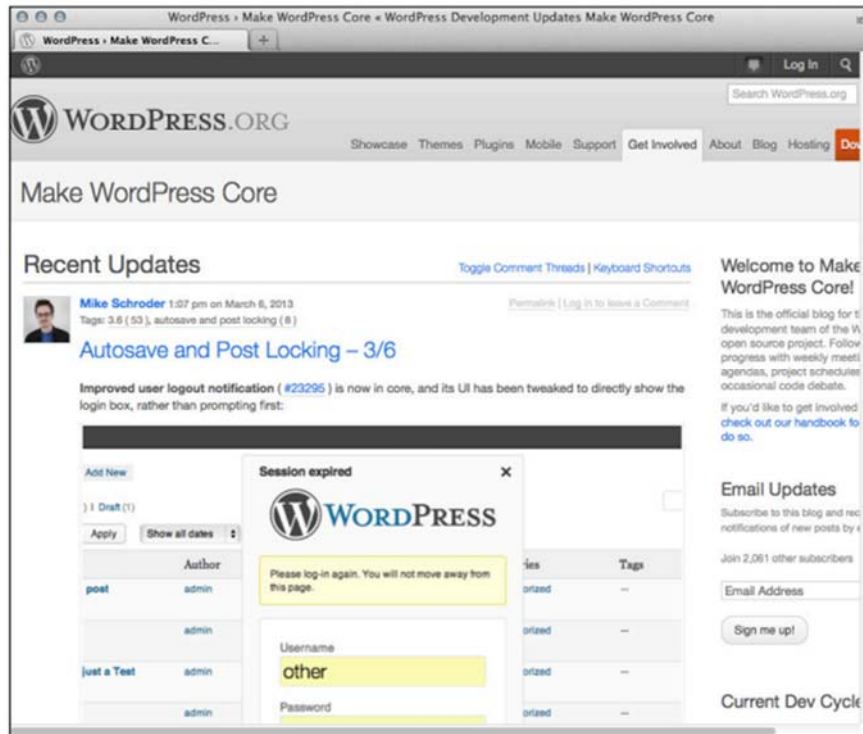


Figure 1: Illustrated the official WordPress development updates blog.

- b. **WordPress Developer Chat:** WordPress developers meet once a week through the Internet Chat Relay (IRC) software to discuss a planned agenda of issues that need to be addressed during the development cycle (<http://freenode.net/irc/servers.shtml> in the #WordPress-dev chat channel). You are asked to join the IRC chat room so that you may watch or take part. At [www.mirc.com](http://www.mirc.com) or [www.ircle.com](http://www.ircle.com), you may download the free mIRC software for PCs or the Ircle program for Macs. Use IRC to talk online by following the directions in the program's user manual [4].



- c. **WordPress Trac:** You can follow along here (<http://trac.wordpress.org>) with the changes in WordPress development by:

**Following the Timeline:** <http://core.trac.wordpress.org/timeline>

**Viewing the Roadmap:** <http://core.trac.wordpress.org/roadmap>

**Reading available reports:** <http://core.trac.wordpress.org/report>

**Performing a search:** <http://core.trac.wordpress.org/search>

- d. **WordPress Mailing Lists:** Join mailing lists focused on different aspects of WordPress development, such as bug testing, documentation, and hacking WordPress ([http://codex.wordpress.org/Mailing\\_lists](http://codex.wordpress.org/Mailing_lists)).

## Managing Content with WordPress

WordPress gives you a variety of options for categorising, archiving, and organising the information on your website, blog, or both. The WordPress software has the ability for you to keep classified and chronological archives of your published history, allowing users to your website to quickly search and read the information they're interested in. WordPress sorts and arranges everything you write in a way that you and your audience can access by timestamp and category using the PHP and MySQL technologies. Every post you make to your blog automatically through this archiving procedure.

This chapter covers all aspects of WordPress archiving, including categories, tags, and more. You also learn how to make use of the built-in permalink system, which generates permalinks for your site that are Search Engine Optimization (SEO) friendly. Last but not least, this chapter walks you through all the many kinds of content you may generate with WordPress. There are other sorts of material and methods to manage it that may help you create a more dynamic and useful website. When people think of content, they normally think of the articles and pages you produce, which is accurate [5].

## Archiving Content with WordPress

You may add a post to a category of your choosing when you make it on your WordPress website. This tool creates a really clever archive that you and your visitors can use to discover articles and topics that you've categorised. In order to make it simple to find articles that you've written at a certain period, articles that you upload are also classified and grouped by date (day/month/year). On my company website, the archives page includes a list of pages, a list of the months in which material was produced, and a list of subjects. You can find it at <http://webdevstudios.com/sitemap>. As illustrated in Figure 2, when you click a month on that page, for instance, you are sent to a page containing articles from that month with links to the individual trainings.

WordPress archives and organizes your content in a variety of ways in addition to dates and categories. I give you an outline of a few of the other ones in this chapter. Later in this book, I'll demonstrate how to use those archive kinds to build a dynamic website that is simple for users to traverse. The many categories of archives and material consist of:

- a. **Categories:** To make it simple to archive articles on pertinent themes, define categories of topics for your articles to be filed under. Instead of using a basic chronological listing, websites often use what is known as a magazine theme, which groups information into



categories and displays it all by subject. Figure 3 is an illustration of a magazine theme (the Modern Blogger by StartBox at <http://demo.wpstartbox.com/?theme=modern-blogger>).

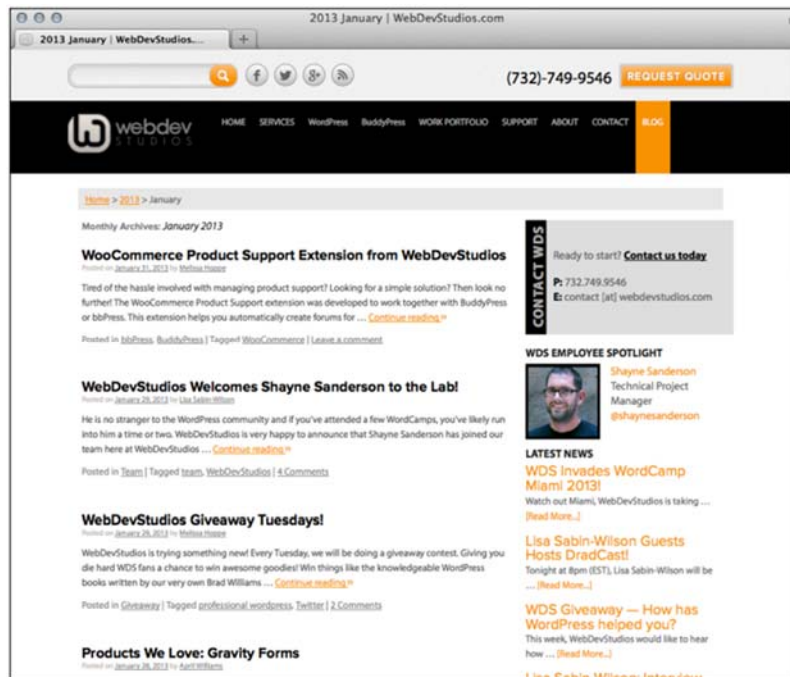


Figure 2: Illustrated the archive listing of posts made in January 2013.

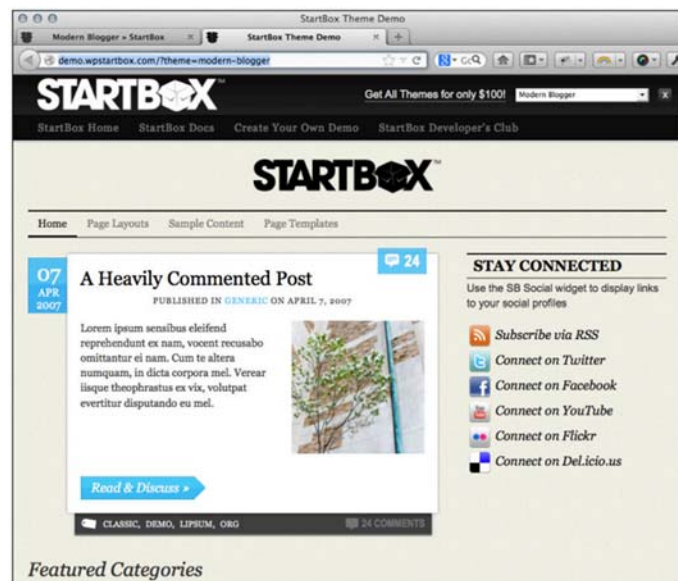


Figure 3: Illustrated the example of a Magazine Theme created with WordPress.

- b. **Tags:** For search engine optimisation (SEO) reasons, tagging your articles with micro-keywords or tags helps dig down related information. It also adds more navigation options for your viewers to access relevant content on your website. To learn how tags and categories are different from one another, go to the sidebar "What are tags, and how/why do you use them?" further in this chapter [6], [7].

- c. **Date based:** Your content is automatically archived by date based on the day, month, year, and time you published it.
- d. **Author:** Content is automatically archived by author based on the author of the post and/or page. Creating an author archive is possible for those sites that have multiple content contributors.
- e. **Keyword (or search):** WordPress has a built-in search function that allows you, and your readers, to search for keywords to see an archive listing of content that's relevant to your chosen keyword.
- f. **Custom post types:** You can build custom post types based on the kind of content your site offers.
- g. **Attachments:** WordPress has a built-in media library where you upload different media files such as photos, images, documents, videos, and audio files (to name a few). You can build an archive of those files to create things like photo galleries, e-book archives (PDFs), or video galleries.

### Building Categories

The primary subject of a blog post is what you choose to categories in WordPress. Your blog entries may be organized into topics by subject using categories. WordPress arranges content according to the categories you give them in order to optimize your visitors' experiences while browsing around your site. Readers may see the blog entries you've written on certain subjects by clicking the categories they are interested in. You should be aware that the list of categories you created may appear on your blog in a number of locations, including the:

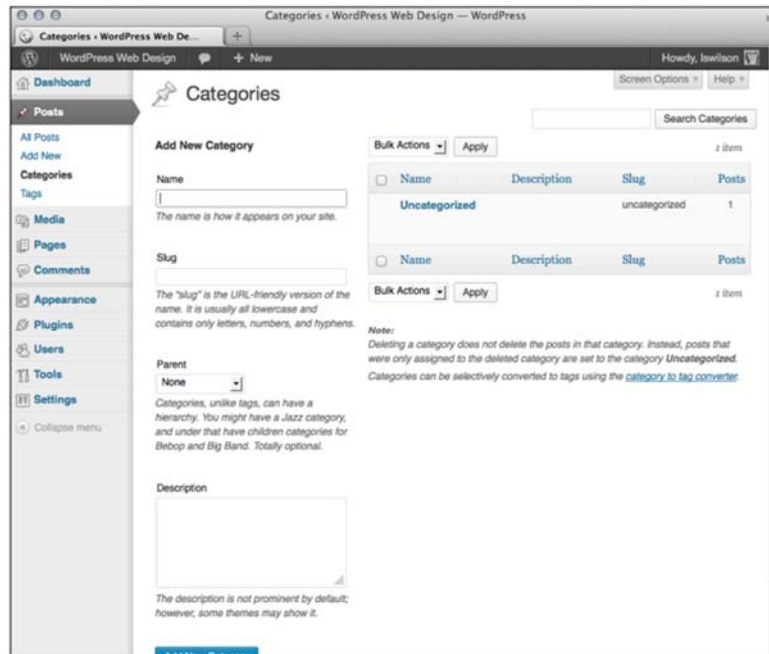
- a. **Post body:** In the majority of WordPress themes, the title is followed by a phrase like "Filed In: Category 1, Category 2." The reader may access a page that includes all the posts you've written in a certain category by clicking the category name. A single post may be assigned to many categories.
- b. **A complete list of category names** may be shown in the sidebar of your blog theme by utilising the Categories widget, which is part of your WordPress installation. Every category on your website may be clicked by a reader to take them to a page listing all the content you've written under that specific category.

Subcategories or category children can further refine the main category topic by listing specific topics related to the main (parent) category. In your WordPress Dashboard on the Manage Categories page (choose Posts ⇌ Categories), subcategories are listed directly below the main category. Here's an example [8]:

- a. Books I Enjoy (main category)
- b. Fiction (subcategory)
- c. Nonfiction (subcategory)
- d. Trashy Romance (subcategory)
- e. Biographies (subcategory)
- f. For Dummies (subcategory)

## Changing the name of a category

WordPress installs with one default category, "Uncategorized," as shown in Figure 4's Categories page. You should absolutely modify the general name of that category to something more personalized for you. I modified it to Life in General on my blog. While the name is still somewhat general, it doesn't seem nearly as unclassifiable.



**Figure 4: Illustrated the Categories page in the Dashboard of a brand-new blog shows the default Uncategorized category.**

The default category also serves as kind of a fail-safe. If you publish a post to your blog and don't assign that post to a category, WordPress automatically assigns that post to the default category, no matter what you name the category. So how do you change the name of that default category? When you're logged in to your WordPress Dashboard, just follow these steps:

- a. **Choose Posts ⇒ Categories:** The Categories page opens, containing all the tools you need to set up and edit category titles for your blog.
- b. **Click the title of the category you want to edit.** For example, if you want to change the uncategorized category, click the uncategorized link. The Edit Category page appears, as shown in Figure 5.
- c. **Type the new name for the category in the Name text box and then type the new slug in the Slug text box.**

*Slug* refers to the word(s) used in the web address for the specific category. For example, the Books category has a web address of <http://yourdomain.com/category/books>. If you change the slug to Books I Like, the web address is <http://yourdomain.com/category/books-i-like>

WordPress automatically inserts a dash between the slug words in the web address.

d. **Choose a parent category from the Parent drop-down list.** If you want this category to be a main category, not a subcategory, choose none.

e. **(Optional) Type a description of the category in the Description text box.**

Use this description to remind yourself what your category is about. Some WordPress themes display the category description on your site, which can be helpful for your visitors. You'll know whether your theme is coded in this way if your site displays the category description on the category page(s).

f. **Click the Update button.**

The information you just edited is saved, and the Categories page reloads, showing your new category name.

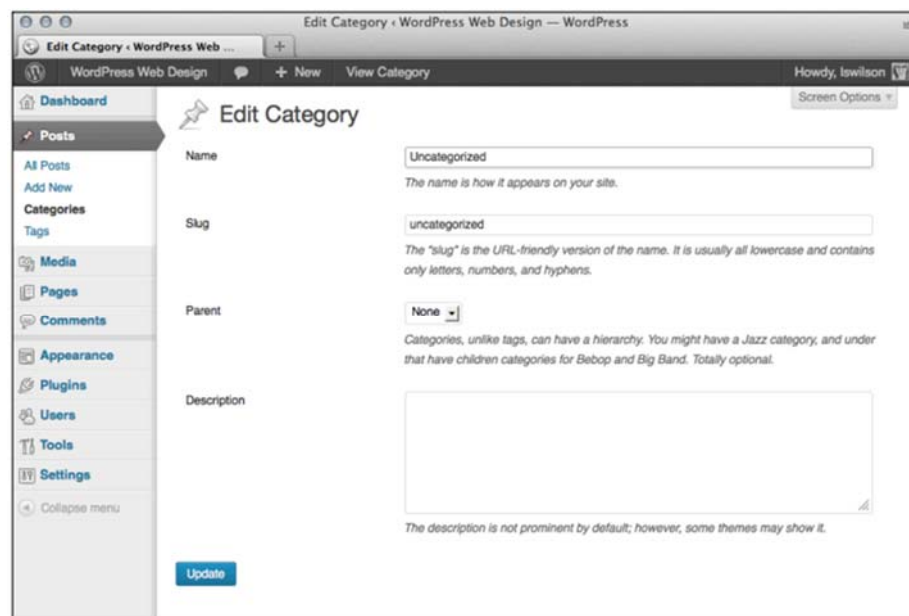


Figure 5: Illustrated the Edit a category in WordPress on the Edit Category page.

### Creating new categories

In order to better define and record the chronology of your blog articles, you will keep creating new categories as your blog expands and ages over the next days, weeks, months, and years. The number of subcategories as well as categories you may establish for your blog is not limited. It's simple to create a new subcategory by following these instructions [9]:

a. **Choose Posts ⇔ Categories:**

The Categories page opens. The left side of the Categories page displays the Add New Category section, shown in Figure 6.

b. **Type the name of your new category in the Name text box.**

Suppose that you want to create a category in which you file all your posts about the books you read. In the Name text box, type something like **Books I Enjoy**.

**c. Type a name in the Slug text box.**

The category page, which has a list of all the entries you've made in this category, is linked to by the slug. WordPress will automatically generate a slug based on the component if you end up leaving this field empty. WordPress automatically generates a category slug looking somewhat like this if the subcategory is Books, Appreciate.

**<http://yourdomain.com/category/books-i-enjoy>**

**d. Choose the category's parent from the Parent drop-down list**

Choose none if you want this new category to be a parent (or top-level) category. If you want this category to be a subcategory of another category, choose the category you want to be the parent of this one.

**e. (Optional) Type a description of the category in the Description text box.**

**f. Click the Add New Category button.**

That's all; your blog now has a new category. With this knowledge, you may expand the amount of categories you can add to your blog. By placing your mouse cursor over the name of the classification you wish to remove and then pressing the Delete option that appears under the category title, you may remove a category from your blog.

**Add New Category**

Name  
  
*The name is how it appears on your site.*

Slug  
  
*The "slug" is the URL-friendly version of the name. It is usually all lowercase and contains only letters, numbers, and hyphens.*

Parent  
 None ▾  
*Categories, unlike tags, can have a hierarchy. You might have a Jazz category, and under that have children categories for Bebop and Big Band. Totally optional.*

Description  
  
*The description is not prominent by default; however, some themes may show it.*

**Add New Category**

**Figure 6: Illustrated the Create a new category on your blog.**

The posts but also links in a category are not removed when it is discontinued. Posts in the removed

category are instead shifted to the default category, which may be whatever you want. You may convert part or all of your subcategories to tags if your WordPress site is already established and has previously been organized into categories. To convert your categories to tags, do so by finding the Category to Tag Converting link on the right side of the Classifications page and clicking it.

### Using static page parents and children

To generate static content material which does not often change, such as nothing more than an About Me or Contact Me page, people utilise the Pages function on their websites. To see the links in the submenus, click the Pages category in the WordPress Dashboard:

**Edit:** By clicking this link, the Edit Pages screen will appear, allowing you to browse, view, edit, and remove any page on your WordPress website.

**Add New:** This button brings up the Add New Page box, where you may write a new blog post, save it, and publish it [10].

In a WordPress website, pages vary from posts because users frequently generate fewer pages with static material, though when users have a website on their site, they are frequently constantly adding blog entries. WordPress distinguishes between the two sorts of content by separating posts from pages. The distinctions between a posting and a page in WordPress are shown in Table 1.

**Table 1: Represented the Differences between a Post and a Page**

Sr. No.	WordPress Options	Page	Post
1.	Appears in blog post listings	No	Yes
2.	Appears as a static page	Yes	No
3.	Appears in category archives	No	Yes
4.	Appears in monthly archives	No	Yes
5.	Appears in Recent Posts listings	No	Yes
6.	Appears in site RSS feed	Yes	Yes
7.	Appears in search results	No	Yes

WordPress enables page hierarchies, which may be useful for organizing pages that are related to one another both thematically and in your site's navigation. For instance, I could write a succinct biography about myself as an author, designer, and motivational speaker on my "About Me" page. When this About Me page was built at, for instance, <http://yourdomain.com/about>, it is recognized as a parent page. I can then develop child pages that are related to the parent page's content and are placed it underneath. I could, for instance, make three pages: Design, Books, and Speaking. These pages each give in-depth knowledge on a different subject. The framework of the navigational would like this:

- i. **About me** (<http://yourdomain.com/about>)
- ii. **Design** (<http://yourdomain.com/about/design>)
- iii. **Books** (<http://yourdomain.com/about/books>)
- iv. **Speaking** (<http://yourdomain.com/about/speaking>)

### Customizing Permalinks

A permalink serves as the URL of the web page each WordPress blog post is allotted. WordPress blogs often include the post URL in four standard places for posts:

- a. The title of the blog post
- b. The Comments link below the post
- c. A Permalink link that appears (in most themes) below the post
- d. The titles of posts in a Recent Posts sidebar

In case you're wondering, the term "perma" refers to a persistent link to one of your blog entries. A post permalink may be used by other bloggers to connect to a specific blog post. So, a post's URL should ideally never change. When you publish a new post, WordPress automatically generates the permalink. With WordPress, a blog post URL looks like this by default: <http://yourdomain.com/?p=100/> [11]. The p stands for post, and 100 is the ID assigned to the individual post. You can leave the permalinks in this format, if you don't mind letting WordPress associate each post with an ID number. WordPress, however, lets you take your permalinks to the beauty salon for a bit of a makeover so you can create pretty permalinks. I bet you didn't know that permalinks could be pretty, did you? They certainly can. Allow me to explain.

### REFERENCES

- [1] R. D. WARD, "Medical Entomology for Students 3rd Edn. By M. W. Service, pp. 285. Cambridge University Press UK, 2004. ISBN 0 521 54775 X. £27.00. (US \$48.00) ," *Parasitology*, 2005, doi: 10.1017/s0031182005228585.
- [2] L. Kwoh, "Your Call That Innovation? Companies Love to Say They Innovate, but the Term Has Begun to Lose Meaning," *Wall Street Journal (Online)*, 2012.
- [3] E. Musk, "Master Plan, Part Deux," *Tesla*, 2016.
- [4] L. Olsson, A. Warren, and J. Ardö, "The potential benefits of carbon sinks in dryland agricultural soils," *Change*, 2001.
- [5] D. Hassler-Forest, "'Two Birds with One Stone': Transmedia Serialisation in *Twin Peaks*," *M/C J.*, 2018, doi: 10.5204/mcj.1364.



- [6] W. Yumei *et al.*, “The Effective use of Social Media in Destination Branding,” *Procedia - Soc. Behav. Sci.*, 2015.
- [7] T. Srinivasan, “Genetics, epigenetics, and pregenetics,” *Int. J. Yoga*, 2011, doi: 10.4103/0973-6131.85484.
- [8] J. Charis-Carlson, “Creativity, Commodification, and the Making of a Middlebrow Book Review,” *M/C J.*, 2005, doi: 10.5204/mcj.2417.
- [9] E. M-J. Saarinen, Q. U. Belfast, J.-P. Aumasson, and Kudelski Security, “The BLAKE2 Cryptographic Hash and Message Authentication Code (MAC),” *Constr. Build. Mater.*, 2015.
- [10] D. M. Sudi, “Efektivitas Dewan Pengawas Syariah pada Perbankan,” *Disertasi UIN Syarif Hidayatullah Jakarta*, 2015.
- [11] L. Jara and J. Juárez, “Relaciones Interpersonales y Desempeño Laboral en los trabajadores del Centro de Salud Morales, 2015,” *Rev. Peru. Obstet. y Enfermería*, 2015.



## CHAPTER 4

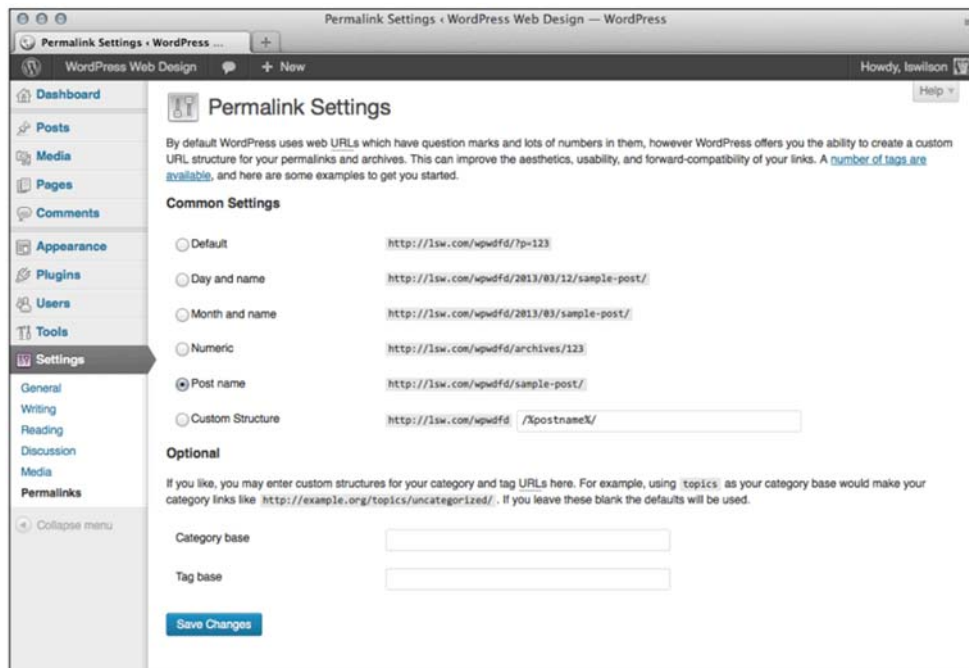
### MAKING POST LINKS PRETTY

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Beautiful permalinks are links that are both more visually appealing and, eventually, more appealing to search engine crawlers than normal links. Beautiful permalinks could resemble this:

**<http://yourdomain.com/2008/01/01/pretty-permalinks/>**

If you break down that URL, you can see the post's creation date in the format of year/month/day. You may also view the post's subject [1]. Choose Settings Permalinks to customise the appearance of your permalinks. Figure 1 illustrates the opening of the Permalink Settings page



**Figure 1: Represented the Make your Permalinks Pretty.**

On this page, you find several options for creating permalinks:

- i. **Default (ugly permalinks):** WordPress assigns an ID number to each blog post and creates the URL in this format: <http://yourdomain.com/?p=100>.
- ii. **Day and Name (pretty permalinks):** For each post, WordPress generates a permalink URL that includes the year, month, day, and post slug/title: <http://yourdomain.com/2008/01/01/sample-post/>.
- iii. **Month and Name (pretty permalinks):** For each post, WordPress generates a permalink URL that includes the year, month, and post slug/title: <http://yourdomain.com/2008/01/sample-post/> [2].

- iv. **Numeric (not so pretty):** WordPress assigns a numerical value to the permalink. The URL is created in this format: `http://yourdomain.com/archives/123`.
- v. **Post Name (recommended):** WordPress takes the title of the post or the page and turns it into a permalink slug like this: `http://yourdomain.com/post-name`
- vi. **Custom Structure:** WordPress creates permalinks in the format you choose. You can create a custom permalink structure by using tags or variables, as I discuss in the next section.

Choose the Day and Name (or Month and Name) radio option, and then clicking the Save Changes button at the bottom of the page to build the pretty-permalink structure. For optimization purposes, Post Name, which utilises the tag `%post name%` in the Custom Structure box located on the Permalink Settings page, is my favourite permalink structure. This structure, which excludes all the date information and simply leaves the post name, or slug, is the one I prefer. For instance, if I use my preferred technique of `%post name%`, my permalinks look like this: `http://lissabin-wilson.com/post-name`; but, if I use the Day and Name structure, they look like this: `http://lissabin-wilson.com/2013/06/02/post-title/`. Notice how it significantly shortens the permalink URL? This approach to search engine optimization is superior, and it also looks nicer [3], [4].

### Customizing Permalinks

A custom permalink structure lets you define which variables you want to see in your permalinks by using the tags listed in Table 2.

**Table 2: Illustrated the Permalink Tags and its Result.**

Sr. No.	Permalink Tag	Results
1.	<code>%minute%</code>	2-digit minute (such as 45)
2.	<code>%second%</code>	2-digit second (such as 10)
3.	<code>%postname%</code>	Text usually the post name separated by hyphens (such as making-pretty-permalinks)
4.	<code>%post_id%</code>	The unique numerical ID of the post (such as 344)
5.	<code>%category%</code>	The text of the category name that you filed the post in (such as books-i-read)
6.	<code>%author%</code>	The unique numerical ID of the post (such as 344)
7.	<code>%hour%</code>	2-digit hour of the day (such as 15 for 3 p.m.)
8.	<code>%day%</code>	2-digit day (such as 30)

9.	%monthnum%	2-digit month (such as 02 for February)
10.	%year%	4-digit year (such as 2007)

If you want your permalink to show the year, month, day, category, and post name, select the Custom Structure radio button in the Permalink Settings page and type the following tags in the Custom Structure text box:

**`/%year%/%monthnum%/%day%/%category%/%postname%/`**

Under this permalink format, the link for the WordPress for Dummies post made on February 1, 2008, filed in the Books I Read category, would look like this:

**`http://yourdomain.com/2008/02/01/books-i-read/wordpress-for-dummies/`**

Before, between, and at the very conclusion of the string of tags, be sure that it contains the slashes. This style guarantees that WordPress generates accurate, functional 301 redirects by using the proper rewrite rules included in your site's `.htaccess` file. The permalinks for all of your blog entries, whether new and old, will be affected if you change the format of your posts and pages in the future. If you ever decide to modify the permalink structure, bear this information in mind. An extremely crucial justification As permalinks are how search engines like Google and Yahoo index the content on your website, altering the permalink format renders all of those indexed connections useless [5].

Don't forget to click the Save Changes button at the bottom of the Permalink Settings page; otherwise, your permalink changes won't be saved!

### **Making sure that your permalinks work with your server**

After you set the format for the permalinks for your site by using any options other than the default, WordPress writes specific rules, or directives, to the `.htaccess` file on your web server. The `.htaccess` file communicates to your web server how it should serve up the permalinks, according to the permalink structure you've chosen to use.

To use an `.htaccess` file, you need to know the answers to two questions:

- a. Does your web server configuration use and give you access to the `.htaccess` file?
- b. Does your web server run Apache with the `mod_rewrite` module?

If you don't know the answers, contact your hosting provider to find out. If the answer to both questions is yes, proceed to the next section. If the answer is no, skip to the "Working with servers that don't use Apache `mod_rewrite`" section.

### **Creating `.htaccess` files**

You and WordPress work together in glorious harmony to create the `.htaccess` file that lets you use a pretty permalink structure in your blog. To create an `.htaccess` file on your web server and set the correct permissions for it, follow these steps:

- i. **Using a plain-text editor, such as Notepad (Windows) or TextMate (<http://macromates.com>) (Mac), create a blank file, name it htaccess.txt, and upload it to your web server via FTP.**

You may not have to create the file (as instructed in Step 1); if the .htaccess file already exists, you can find it in the root of your directory on your web server that is, the same directory where you find your wp-config.php file. If you don't see the file in the root directory, try changing the options of your FTP client to show hidden files because the .htaccess file starts with a period, it may not be visible until you configure your FTP client to show hidden files.

- ii. **After the file is uploaded to your web server, rename the file .htaccess (notice the period at the beginning) and make sure that it's writable by the server by changing permissions to either 755 or 777.**
- iii. **Create the permalink structure in the Permalink Settings page on your WordPress Dashboard.**

See the section "Making your post links pretty," earlier in this chapter.

- iv. **Click the Save Changes button at the bottom of the Permalink Settings page.**

WordPress inserts into the .htaccess file the specific rules necessary for making the permalink structure functional in your blog.

Now you have an .htaccess file on your web server that has the correct permissions set so that WordPress can write the correct rules to it. Your pretty permalink structure works flawlessly. If you open the .htaccess file and look at it now, it's no longer blank. The file should have a set of rewrite rules code, which looks something like this:

```
# BEGIN WordPress
<IfModule mod_rewrite.c>
RewriteEngine On
RewriteBase /
RewriteCond %{REQUEST_FILENAME} !-f
RewriteCond %{REQUEST_FILENAME} !-d
RewriteRule ./index.php [L]
</IfModule>
# END WordPress
```

I could delve deeply into .htaccess and all the things you can do with this file, but I'm restricting this section to how it applies to WordPress permalink structures. If you want to unlock more mysteries about .htaccess, check out <http://javascriptkit.com/howto/htaccess.shtml>.

### Discovering the many WordPress RSS options

There are several varieties of RSS feeds, including RSS 0.92, RDF/RSS 1.0, RSS 2.0, and Atom. The distinctions between them are found in the foundational code that creates the syndication feed's functioning. The fact that WordPress supports all RSS versions is crucial since it enables anybody to subscribe to your RSS feed using any accessible feed reader. WordPress is incredibly user-friendly, and this subsection on RSS feeds is a prime example of an automated tool. WordPress features a built-in feeder generator that creates feeds in the background. Using your articles, comments, and even subcategories [6], [7]. this feed generator generates feeds. Almost all RSS feed readers along with certain browsers immediately recognise the RSS feed URL for a WordPress blog, making it possible for anybody to subscribe to your blog articles through RSS. Table 1 provides instructions on how to locate the RSS feed URLs for the various blog sections:

Sr. No.	Feed Type	Example Feed URL
1.	RSS 0.92	http://yourdomain.com/wp-rss.php or http://yourdomain.com/?feed=rss
2.	RDF/RSS 1.0	http://yourdomain.com/wp-rss2.php or http://yourdomain.com/?feed=rdf
3.	RSS 2.0	http://yourdomain.com/wp-rss2.php or http://yourdomain.com/?feed=rss2
4.	Atom	http://yourdomain.com/wp-atom.php or http://yourdomain.com/?feed=atom
5.	Comments RSS	http://yourdomain.com/?feed=rss&p=50 'p' stands for post, and 50 is the post ID. You can find the post ID in the Dashboard by clicking the Posts link.
6.	Category RSS	http://yourdomain.com/wp-rss2.php?cat=50 'Cat' stands for category, and 50 is the category ID. You can find the category ID in the Dashboard by clicking the Categories link in the Posts menu.

If you're using custom permalinks, you can simply add /feed to the end of any URL on your blog to find the RSS feed. Some of your links look similar to these:

- a. <http://yourdomain.com/feed>: **Your main RSS feed**
- b. <http://yourdomain.com/comments/feed>: **Your comments RSS feed**

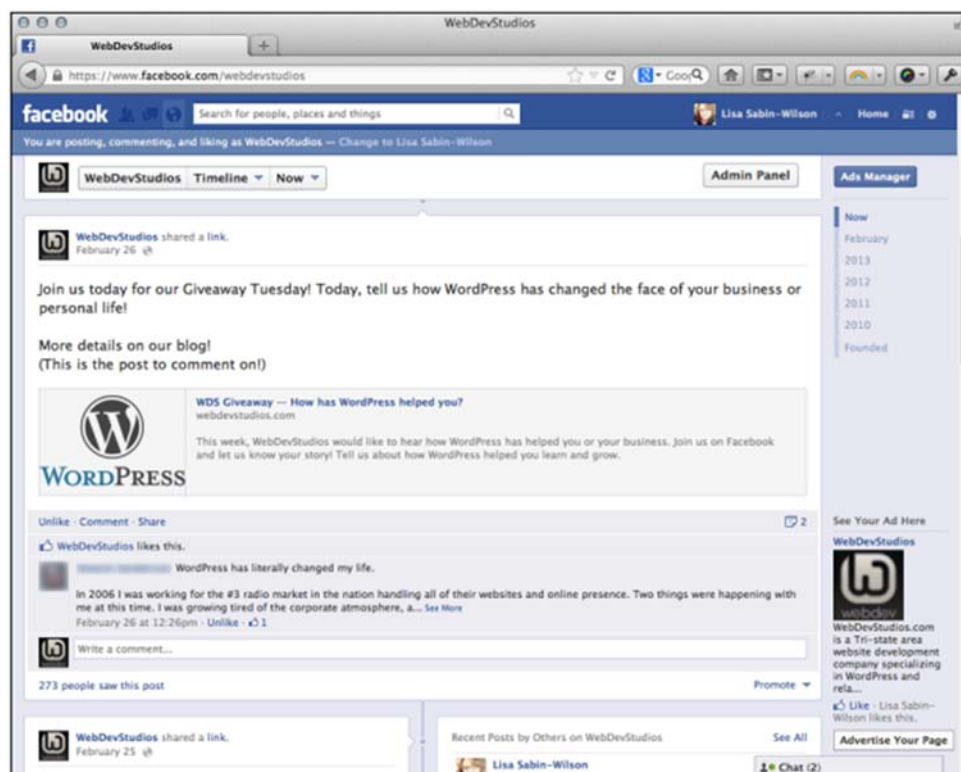
- c. <http://yourdomain.com/tag/tag-name/feed>: **RSS feed for a tag**
- d. <http://yourdomain.com/category/cat-name/feed>: **RSS feed for a category**

Try adding /feed with any URL on your site. You get the RSS feed for that page.

Readers may access your blog's material by connecting to RSS feeds. Nowadays, RSS feeds are assumed, thus WordPress has a decided advantage over other blog-software platforms since it has taken care of the feeds for you, complies with all RSS formats, and includes so many internal feeds. The Atom broadcasting protocol is disabled by default; if you would like to utilize it, you must explicitly authorize it. To enable Atom publishing in WordPress, go to the Dashboard, click Settings writing, and then tick the two boxes in the Remote Publication section.

### Using your RSS feeds with your Social Media Accounts

The use of RSS feed technology is crucial when providing information to a blog or website. Readers have the flexibility to subscribe to more than just your website's syndicated material through RSS. Publishers of websites contribute in other social networks that leverage the RSS feeds from their websites to publish, sell, and aid in the identification of their material by other web browsers, also including:



**Figure 2: Illustrated the website RSS feed shared on my Facebook profile.**

- a. **Twitter:** There are many of potential website visitors on this widely used social networking platform. You may publish fresh blog entries and other information to your Twitter stream using the previously mentioned tools. Several website owners make advantage of this effective marketing strategy (<http://twitter.com>) [8].

- b. Facebook:** With this incredibly well-liked social media platform, you may instantly post blog and website material to your Facebook page, making it visible to the network's hundreds of users. Figure 2 depicts my personal Facebook profile, which automatically populates my profile page with material from my company website (<http://webdevstudios.com>). This is accomplished magically by connecting my Facebook account to my website's RSS feed. ([www.facebook.com](http://www.facebook.com)) [9]–[11].

## REFERENCES

- [1] B. A. van der Kolk, “The drug treatment of post-traumatic stress disorder,” *J. Affect. Disord.*, 1987, doi: 10.1016/0165-0327(87)90024-3.
- [2] K. Fletcher, “Why blogs are an open door,” *Br. Journal. Rev.*, 2007, doi: 10.1177/0956474807080945.
- [3] D. Weinberger, “How the father of the world wide web plans to reclaim it from Facebook and Google,” *Digit. Trends*, 2016.
- [4] D. Colquhoun, “Why you should ignore altmetrics and other bibliometric nightmares,” *DC’s Improbable Science*. 2014.
- [5] L. C. Freeman, “The Development of Social Network Analysis – with an Emphasis on Recent Events,” in *The SAGE Handbook of Social Network Analysis*, 2015. doi: 10.4135/9781446294413.n3.
- [6] B. Nogrady, “Australia plans ‘national-interest’ test for research grants,” *Nature*, 2018, doi: 10.1038/d41586-018-07255-7.
- [7] S. S. Dash, “Explorations in Ecocriticism: Reading the Select Novels of Cormac McCarthy in the Light of Anthropocentrism and Cartesian Thinking.,” *SMART MOVES J. IJELLH*, 2020, doi: 10.24113/ijellh.v8i2.10380.
- [8] C. Dewey, “6 in 10 of you will share this link without reading it, a new, depressing study says,” *The Washington Post*, 2016.
- [9] N. Usher, “Participation, Branding, and the New New York Times,” in *Making News at The New York Times*, 2018. doi: 10.2307/j.ctv65sxjj.10.
- [10] R. Koster, “The cost of games,” *Gamasutra: Raph Koster’s Blog*, 2018.
- [11] A. J. GORDON, “Urban Place: Reconnecting with the Natural World:Urban Place: Reconnecting with the Natural World,” *Am. Anthropol.*, 2006, doi: 10.1525/aa.2006.108.3.561.



## CHAPTER 5

### CHOOSING THE RIGHT TOOLS

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#### Exploring Editors, Browsers, and FTP

In 1998, I began constructing my own tiny area of the web and encountered a vast amount of new content. There is no denying that technology progresses quickly, so if you're serious about turning web design into a job or even a serious pastime, you need to stay up. Since you are always understanding new and developing technologies, working as a full-time web designer and developer is like going back to school. I've also come to realise absolutely important it is to have the appropriate tools on hand whenever starting any web design job, no matter how big or little, at the computer. The effectiveness, importance, and overall experience of developing a website are improved dramatically by using the appropriate equipment [1].

You learn about many tools in this chapter for topics like editing HTML, CSS, and PHP. Also, you investigate alternative online browser platforms, also including Internet Explorer and Mozilla Firefox, as well as the technologies and add-ons that you may use to personalize a browser to meet your objectives for web design. Eventually, you solve the File Transfer Protocol (FTP) puzzle, learning what it is, how to use it, and the many applications you may use. The tools I talk about in this chapter may not always be appropriate, but when you uncover tools that significantly ease the task of web design, you'll be immensely grateful. You delve into WordPress themes, deal with CSS and HTML, type template tags, and dabble with a little PHP in Part III of this book. You will have the understanding and assets from this chapter to help you get ready for a quick and easy experience.

Nothing surpasses a decent, consistent text editor compared to the trusty old pen and paper. I'll face it, I'm a little old school, so I still use a pad of paper and a pen for things like making product recommendations and writing down ideas. Sadly, creating code by hand is laborious, and when I need to post it online, it doesn't convert properly. A simple text-editing program can come in handy in this situation. I always have one open on my computer, generally many examples of my preferred text editor, and I use it to code WordPress widgets and themes as well as Cascading Style Sheets (CSS) and HTML.

When writing any code, be sure that you use a text editor rather than a word processing tool like Microsoft Word since the latter mechanically adds formatting, characters, and hidden spaces. Stick with a simple text editor while creating code since the last thing you want is for anything other than your own code to be added into the page.

#### Notepad (Windows)

Use Notepad, a simple text editor, to establish appropriate without having to bother or care about appearance. Notepad is ideal for generating code and online pages since it doesn't accept any particular document structuring or characters [2].

Since Notepad is a Microsoft product and includes with every Windows operating system, it is the windows application of choice for the majority of Windows users. Many people, and myself included, use Notepad to generate simple CSS and HTML files in addition to reading and editing text files with the.txt extension.

By default, Notepad saves documents with the.txt extension. Make sure you save the files with the appropriate extension since WordPress templates and theme files are often saved with a.php or.css extension. Follow these simple steps in Windows 7 to save a file with the .php or.css extension:

**a. Choose Start ⇒ All Programs ⇒ Accessories ⇒ Notepad.**

Notepad opens, and you can start typing your code.

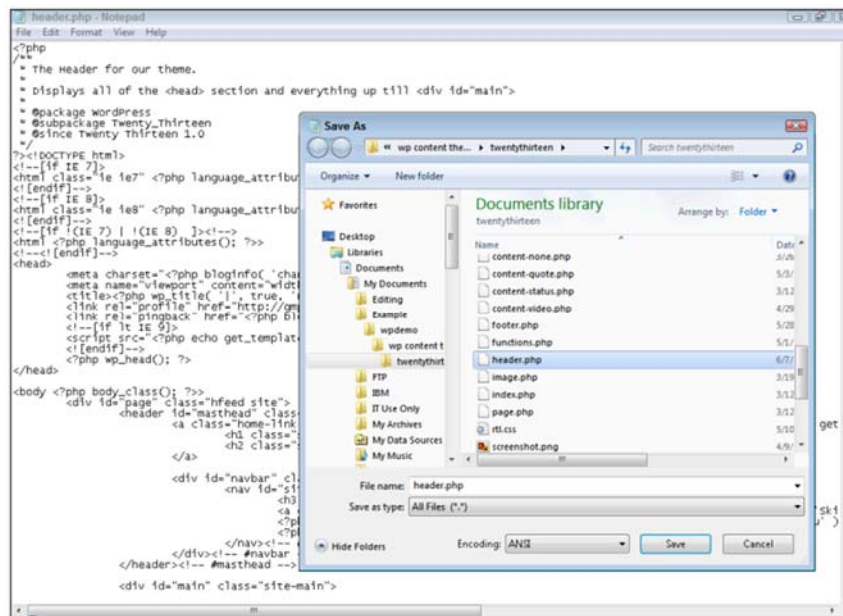
**b. Create your CSS or PHP document.**

Check out Chapter 14 for details on how to create CSS.

**c. Choose File ⇒ Save As, and then choose the location on your computer where you want to save the file.**

**d. Type the filename, including the extension, in the File Name field.**

In Figure 1, the name of my PHP file is **header.php**. However, if you're saving a CSS document, the extension is **.css**, such as **style.css**.



**Figure 1: Illustrated the Saving a PHP document in Notepad.**

**e. Choose All Files in the Save as Type drop-down list.**

By default, Notepad wants to save the file with the file type Text Documents (\*.txt).

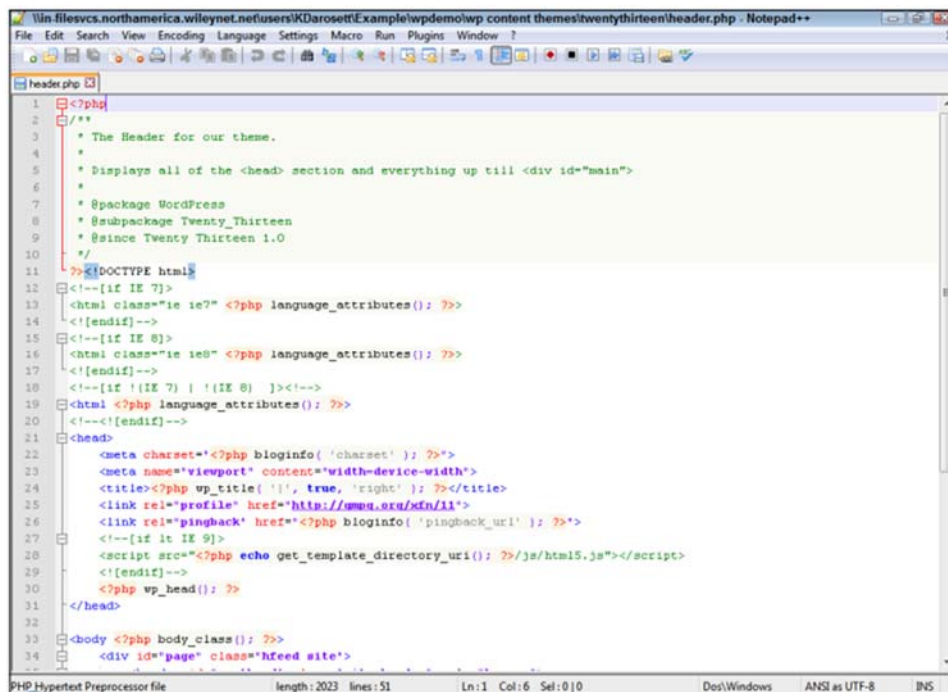
**f. Leave ANSI chosen in the Encoding field.**

This is default character encoding and is okay to leave as is.

- g. Click Save.

### Notepad++ (Windows)

Because of how similar the interface of Notepad++ and ordinary Notepad appears, Notepad++ is sometimes referred to as "Notepad on steroids" and is a text editor for Windows. Notepad++ is a very useful and beneficial programme for creating and modifying code since it offers sophisticated features including color-coded syntax (see the neighbouring sidebar "Code syntax highlighting"), code indentation, and line numbering. The layout of this editor's code syntax is shown in Figure 2 [3]. The primary programming languages you will use for this book—CSS, HTML, and PHP— are supported by Notepad++. The programme Notepad++ is open-source and free.



```

1  <?php
2  /*
3   * The Header for our theme.
4   *
5   * Displays all of the <head> section and everything up till <div id="main">
6   *
7   * @package WordPress
8   * @subpackage Twenty_Thirteen
9   * @since Twenty Thirteen 1.0
10  */
11  >><!DOCTYPE html>
12  <!--[[if IE 7]]
13  <html class="ie ie7" <?php language_attributes(): ?>
14  <![endif]-->
15  <!--[[if IE 8]]
16  <html class="ie ie8" <?php language_attributes(): ?>
17  <![endif]-->
18  <!--[[if !(IE 7) | !(IE 8) ]]><!--
19  <html <?php language_attributes(): ?>
20  <!--[[endif]-->
21  <head>
22  <meta charset="<?php bloginfo( 'charset' ); ?>"
23  <meta name="viewport" content="width=device-width"
24  <title><?php wp_title( '|', true, 'right' ); ?></title>
25  <link rel="profile" href="http://gmpg.org/xfn/11/"
26  <link rel="pingback" href="<?php bloginfo( 'pingback_url' ); ?>"
27  <!--[[if lt IE 9]]
28  <script src="<?php echo get_template_directory_uri(); ?>/js/html5.js"></script>
29  <![endif]-->
30  <?php wp_head(); ?>
31  </head>
32
33  <body <?php body_class(); ?>
34  <div id="page" class="hfeed site">

```

**Figure 2: Illustrated the Notepad++ with color-coded syntax.**

### TextMate (Mac)

TextMate can only be used on a Mac since it is an Apple product. The most well-known text editor for Macs is TextMate, sometimes known as "the missing editor." TextMate is a syntax editor similar to Notepad++. It color-codes the markup and code you type and contains several capabilities common to most syntax editors, such as:

- a. Simple replacement and searching
- b. Markup and code that automatically indents and is color-coded
- c. Where appropriate, opening several documents, each in a separate tab.
- d. Serving as an outside editor for FTP software

But, TextMate is not cost-free. A 30-day trial download is available at <http://macromates.com>. You may spend \$56 to purchase a single user licence once the trial period has ended.

## Understanding and Choosing a Web Browser

There are so many online browsers available that choosing one to use as your main browser might be perplexing. Everyone has a preferred browser, and if you don't already have one for a variety of reasons, you soon will. Every browser system differs in terms of appearance, feel, functionality, and tools. You'll discover that a certain browser becomes your favoured one for your own surfing experience due to its features and functions [4]. To ensure that your web designs display and seem the same across all major browsers, you must have access to all of them. Only then can you test and view your web designs in various browsers. Download and install every browser I mention in this section if you can so you may test your ideas on many platforms. Use the browsers that are compatible with your system since some are system-specific (available only for Windows or Macs).

### Discovering browsers and tools

There are several browser platforms accessible online. The five most widely used browsers for Internet users are covered in this section. With the various browser systems, you may also discover some useful tools, add-ons, and extensions that aid you with your web design work. These comprise a few of my favourite and often used essential tools.

The World Wide Web Consortium (W3C), an international community that creates online standards to promote long-term web growth, is where the decision of which web browser to use generally comes down to how compatible the browser is with open web standards ([www.w3.org](http://www.w3.org)). The W3C and the standards it supports and promotes should at the very least be familiar to you as a designer. On the website, you may read the W3C's vision and purpose statements. [w3.org/consortium/mission.html](http://w3.org/consortium/mission.html) [5].

### Google Chrome

Google Chrome ([www.google.com/chrome](http://www.google.com/chrome)) is the most popular web browser today, according to W3Schools report on browser statistics and trends: [www.w3schools.com/browsers/browsers\\_stats.asp](http://www.w3schools.com/browsers/browsers_stats.asp). Chrome was developed and released by Internet search giant, Google. Chrome has an active development community and has add-ons, or extensions, that you can install it easily on your computer on a Mac, Windows, or Linux. You can find web development-related extensions for Google Chrome at [https://chrome.google.com/extensions/featured/Web\\_dev](https://chrome.google.com/extensions/featured/Web_dev).

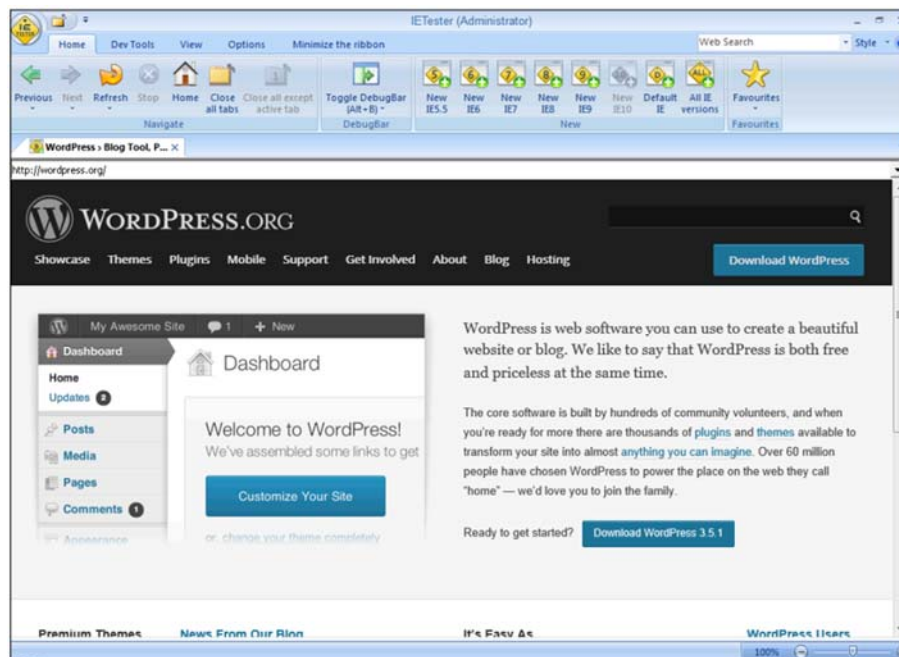
### Internet Explorer

Since it comes standard with all Microsoft Windows operating systems, Internet Explorer (IE) is by far one of the most widely used browsers. The development and design communities have learned to enjoy and expect other browser systems' support for web standards and CSS rendering, but IE has battled with this reputation over the years. The layout engine that forms the basis of Internet Explorer is primarily to blame for this.

The many versions of Internet Explorer that are often used on the web provide one difficulty for designers. But Microsoft's main browser becoming more and more compliant with open web standards with each new release. Yet, while IE is the default browser on millions of able to operate systems worldwide, not every user or business immediately adopts new versions as soon as they

are made available. Because of this, there are several versions of IE in use globally, and designers often make an effort to ensure that at least the last two to three current versions of IE display their designs properly [6].

Versions 8, 9, and 10 of Internet Explorer are now supported by the vast majority of designers, with versions 6 and 7 steadily losing support (commonly referred to as IE6 and IE7, respectively). It may be challenging to test designs on several Internet Explorer versions because, if you don't know what you're doing, installing various versions of Internet Explorer on your computer can be quite frustrating. I use a number of tools for testing several browsers generally, but IETester is useful for especially evaluating various IE iterations. IETester may be downloaded from [www.my-debugbar.com/wiki/IETester](http://www.my-debugbar.com/wiki/IETester). In Figure 5-3, the top buttons are labelled with the IE versions that they correspond to: IE5.5, IE6, IE7, IE8, IE9, and IE10. The WordPress website is seen on IE7 in the picture.



**Figure 3: Illustrated the Test different IE versions with IETester.**

## Mozilla Firefox

The second-most prevalent web browser is Firefox, which has grown to be a serious IE rival over time. Since Mozilla (the company that makes Firefox) utilises a reliable layout engine that carefully abides by open web standards and understands and displays CSS better, designers and developers tend to choose Firefox over IE. More than 70 languages and the Windows, Mac, and Linux operating systems may all be used with Firefox. It is available for download from <http://mozilla.com>, the Mozilla website.

Notwithstanding the fact that it follows open web guidelines and displays CSS the way it was intended to be presented, Firefox is one of the key reasons I prefer it over other browsers. In addition, Firefox is an open-source software project with a thriving planning profession that

produces highly useful add-ons and plugins, extending its functionality beyond that of a simple web browser and, in many instances, transforming it into a web development tool [7].

### And the rest

There are a few additional web browsers that are often used but aren't as well known as Chrome, IE, or Firefox. These are nonetheless worth looking at:

- a. **Opera:** For PC, Mac, and Linux users, Opera ([www.opera.com](http://www.opera.com)) is marketed as being quick, safe, and fully compliant with open web regulations, including modern programming languages like HTML5 and CSS3. Moreover, Opera offers add-ons that you may get at <http://addons.opera.com>.
- b. **Safari:** Every Mac, including the huge iMac computers, MacBook laptops, iPads, and iPhones, comes pre-installed with Safari ([www.apple.com/safari](http://www.apple.com/safari)). In a nutshell, Safari is an Apple product, but Windows users may easily install it. Safari comes with built-in web developer tools like the following instead of a tonne of add-ons you may download and install:
  - a) A developer toolbar with tools for website manipulation, testing, and debugging,
  - b) A Web Inspector with a wealth of web development tools, including an Element pane where you can inspect CSS markup,
  - c) A Resources pane that displays a website's resources by date, size, and speed,
  - d) A JavaScript Debugger that displays any problems your site is experiencing due to JavaScript that is in use,
  - e) A Timeline pane that analyzes a website's behavior over time,
  - f) A JavaScript Profiler that lists the performance characteristics of scripts that run on a website,
  - g) A Console pane for debugging,
  - h) A Snippet Editor to test HTML markup

### Understanding cross-browser compatibility

In web design, cross-browser compatibility, which involves testing designs on all popular browser platforms, is crucial since you don't only create websites for yourself but for a global audience as well. You must test your designs across all platforms since you have no clue which browsers your audience will be using, in order to guarantee that they all enjoy the same user experience [8].

Web designers have trouble using web browsers due to the fact that each has a unique layout engine that displays CSS differently. The layout engine is the code that the browser employs to translate design languages like CSS and HTML. It may often be quite difficult to modify your CSS style in order to make it suitable for the various layout engines that



are provided due to the differences in CSS rendering. Moreover, not all layout engines are functional with every CSS version. To help you understand what you're functioning with in various browser systems, Table 1 lists the many layout engines, browsers, and CSS versions the layout engine supports.

**Table 1: Represented the Layout Engines, Browser Types, and CSS Version Support**

Sr. No.	Layout Engine	Browser System	Supports CSS Version
1.	Gecko	Mozilla Firefox	CSS v1, v2, v3 (partially)
2.	Presto	Opera	CSS v1, v2, v3 (partially)
3.	Trident	Internet Explorer	CSS v1, v2, v3 (slightly)
4.	WebKit	Google Chrome, Safari	CSS v1, v2, v3 (partially)

Downloading the various browsers to your computer, loading your website in each one, and verifying for proper rendering as you go is the only method to test your website throughout the major browser platforms. But you can't actually test your website on a Mac or vice - versa if you just have a Windows machine. But don't worry, I use these two workarounds when I need to test my projects on a browser that I don't have access to:

- a) **Browser shots:** This is a browser-based, online tool. Insert your chosen web address in the Input URL Here area at the top of the page on the Internet explorer Shots website (<http://browsershots.org>), then choose the browsers and operating systems of your choice. For your simplicity, browser shots capture a snapshot of your website in every one of the browsers you choose. Then, if necessary, you may address any issues and retest.
- b) **Browser Stack:** This online tool for checking cross-browser compatibility allows you to examine your website in real-time using a Flash interface. While this service is free, choice premium improvements are available at <http://browserstack.com> for a fee.

### Introducing File Transfer Protocol (FTP)

You will come across the phrase "File Transfer Protocol" throughout this book (FTP). You may upload and download WordPress files via FTP, edit files, and modify file permissions, among other things. The fundamental components of FTP are covered in this section. Almost all web hosts on the market will allow you to utilize FTP with your hosting account. FTP is a method for transferring files between locations, such as:

- a) Uploading: Transferring files from your local computer to your web server
- b) Downloading: Transferring files from your web server to your local computer



You can do several other things with FTP:

- a) **View files:** After you log in via FTP, you can see all the files that are located on your web server.
- b) **See dates when files were modified:** You can see the date the file(s) was last modified, which can sometimes be helpful when troubleshooting problems.
- c) **See file sizes:** You can see the size of each file on your web server, which is helpful especially if you need to manage the disk space on your account.
- d) **Edit files:** Almost all FTP clients allow you to open and edit files through the client interface, which is a convenient way to get the job done.
- e) **Change permissions:** Commonly referred to as CHMOD (change mode), it controls what type of read/write/execute permissions the files on your web server have [9].

Using FTP to transfer files requires an FTP client, or program. Many FTP clients are available for download. Following are some good ones:

- a) **WS\_FTP LE (Windows):** [www.wsftple.com](http://www.wsftple.com)
- b) **SmartFTP (Windows):** [www.smartftp.com/download](http://www.smartftp.com/download)
- c) **FileZilla (Windows or Mac):** <http://sourceforge.net/projects/filezilla>
- d) **Cyberduck (Windows or Mac):** <http://cyberduck.ch>
- e) **FTP Explorer (Windows):** [www.ftpx.com](http://www.ftpx.com)

Your web host provides you with a login, password, and FTP IP address for your account. The FTP address often corresponds to your domain name, but verify with your web server since addresses might change. To connect the FTP application to your hosting account, you must enter the login, password, and FTP IP address shown above. My FTP client is linked to my hosting account as seen in Figure 4. My computer's files are shown in the directory on the left, while my hosting account's files are listed in the directory on the right.

Drag-and-drop functionality provided by FTP clients makes it simple to move files from your PC to your hosting account. Just choose the file you wish to move on your computer, move it to the side of the screen where it specifies the directory on your hosting account, and drop it there. You may consult its user manuals or support material for comprehensive instructions on how to utilise the FTP client you've selected to work with.

### Setting Up FTP on Your Hosting Account

Just make sure that FTP is accessible to you for your account with your hosting provider. Many web providers include FTP as part of their hosting packages. The particulars of a web hosting environment, and the majority of web providers offer the hosting account administration interface cPanel. The hosting account administration tool used by the majority of web providers is by far cPanel. Others, including Plesk and Netadmin, are utilised as well but are less well known.

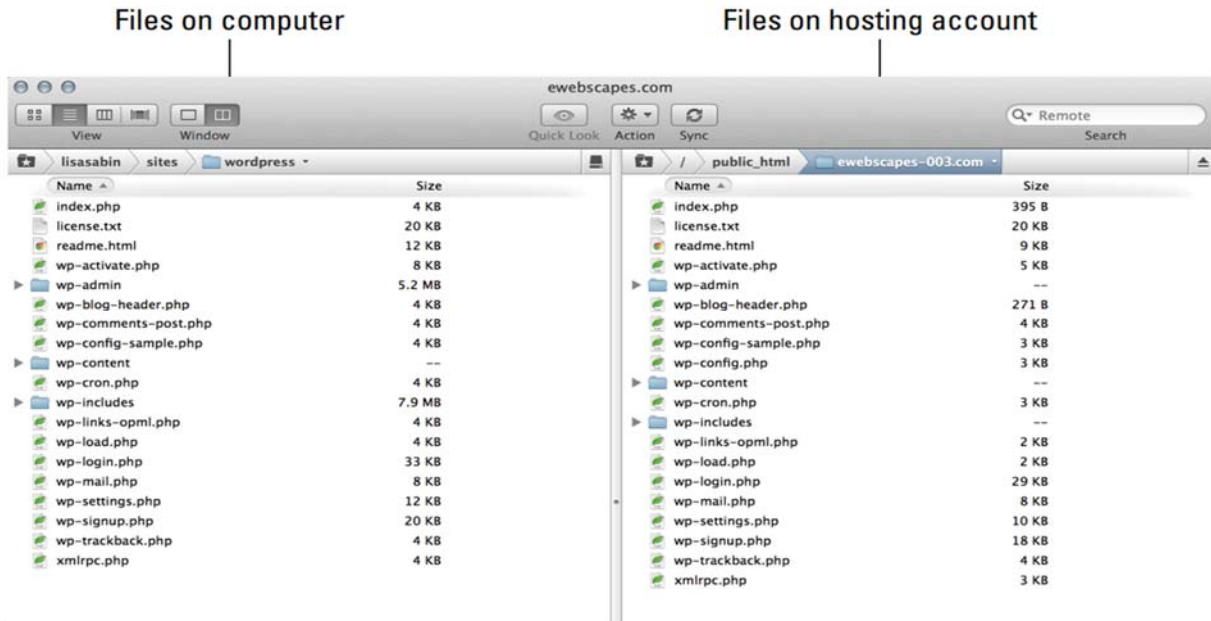


Figure 4: Illustrated the Using an FTP-Client makes File Transfers Easy.

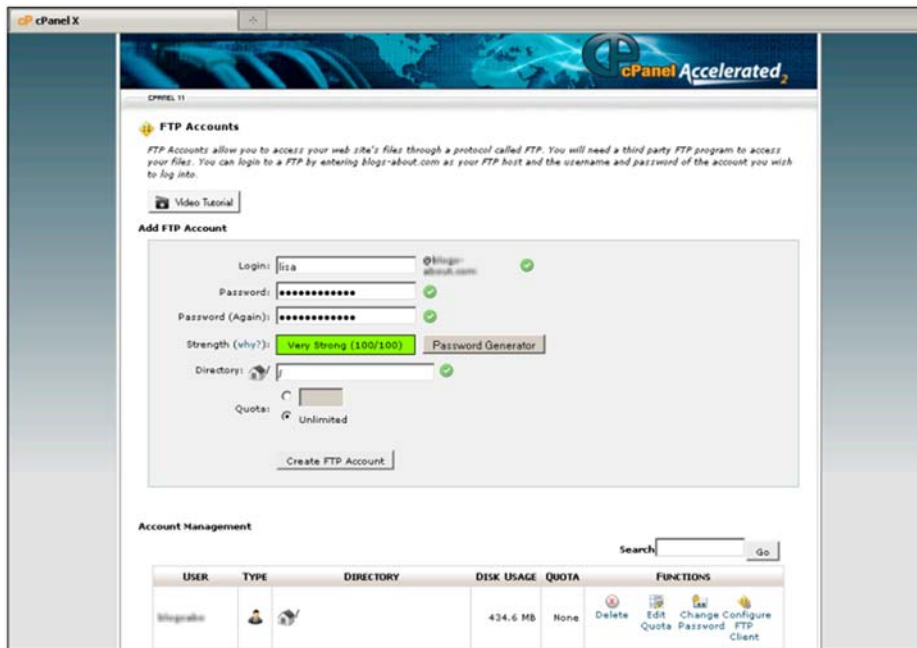


Figure 5: Illustrated the FTP Accounts page within cPanel.

While I utilise cPanel throughout this chapter, if your hosting company provides you with a key difference between the two to work with, the ideas are the same; nevertheless, you should consult your hosting service for the details so that you may modify my instructions to fit your environment. The FTP for your hosting account is often configured automatically. To access and configure your FTP account, go to the FTP Accounts page (Figure 4), by following these simple steps:

**Log in to the cPanel for your hosting account:**

- a. Browse to <http://yourdomain.com/cpanel> to bring up the login screen for your cPanel (where your domain is your actual domain name).
- b. Enter your specific hosting account username and password in the login fields and then click OK.

**Click the FTP Accounts link and/or icon in your cPanel to open the FTP Accounts page, shown in Figure 5.**

**Check to see if you have an existing FTP Account.**

You may skip the next steps in this section if you have previously established an FTP account. You notice it under the Account Erm framework if your hosting company automatically creates an FTP account for you. 90% of the time, your hosting account's username and password—or the credentials you used to access your cPanel in Step 1 will be utilized as the default FTP account's username and password.

**(Optional) Create a new FTP Account.**

If the Account Management portion of the FTP Accounts page doesn't display a default FTP user, use these instructions to establish one in the Add FTP Account section:

**a) Type your desired username in the Login text field.**

This creates the username of `username@yourdomain.com` (in which username is the desired username you typed and your domain.com is your specific domain name).

**b) Type your desired password in the Password text field and then retype it in the Password (Again) text box to validate it.**

You can either type your own chosen password or click the Password Generator button to have the server generate a secure password for you.

**c) Check the Strength indicator.**

The server tells you whether your password is Very Weak, Weak, Good, Strong, or Very Strong. You want a Very Strong password for your FTP account so it's very hard for hackers and malicious Internet users to guess and crack.

**d) Leave the Directory text box blank.**

As the site owner, you want access to the root level of your hosting service, therefore leave this box empty. Hence, leave this field empty. By specifying which directory the FTP user has access to, you may later restrict access to your hosting directory if you create FTP accounts for additional users.

**e) Leave the default Unlimited radio button selected to indicate the space limitations in the Quota text field.**

For adding new FTP users in the future, you may set a limit on the available space in megabytes (MB) by choosing the second radio choice and entering a number value, such 50MB, in the text box.

**f) Click the Create FTP Account button.**

A new screen loads with a message that the account was created successfully; it also displays the settings for this new FTP account.

**g) Copy and paste these settings into a text editor, such as Notepad or TextMate.**

These settings contain the connection details you need to connect via FTP and looks like this (the FTP username, password, and server are specific to your domain and the information you entered in the preceding steps) [10]:

**FTP Username:** lisa@yourdomain.com

**Password:** {W? \$s((7Tqi

**FTP Server:** ftp.yourdomain.com FTP Server Port: 21 (your web server automatically assigns the FTP Port)

**Quota:** Unlimited MB

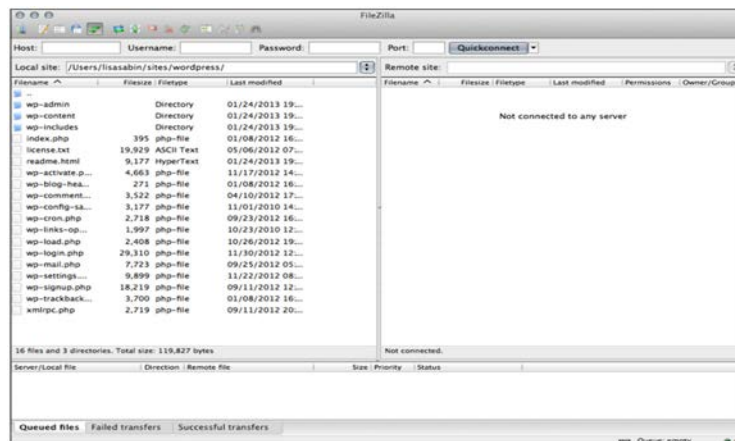
### Transferring Files with an FTP Client

After you create an FTP account on your web server, as described in the preceding section, you're ready to connect your FTP client to your web server so you can begin transferring files.

### Connecting to the web server via FTP

For the purposes of this chapter, I use the Mozilla FileZilla FTP client (<http://sourceforge.net/projects/filezilla>). FileZilla is my favorite FTP client software because it's easy to use and the cost is free ninety-nine that's open-source geek speaks for free!

Figure 6 shows my FileZilla client, which is not yet linked to any servers. An organizational listing of the files and folders from my local computer may be seen on the left side of the window. Before I connect to my web server, nothing is shown on the right-hand side of a window; after I do, something will appear there.

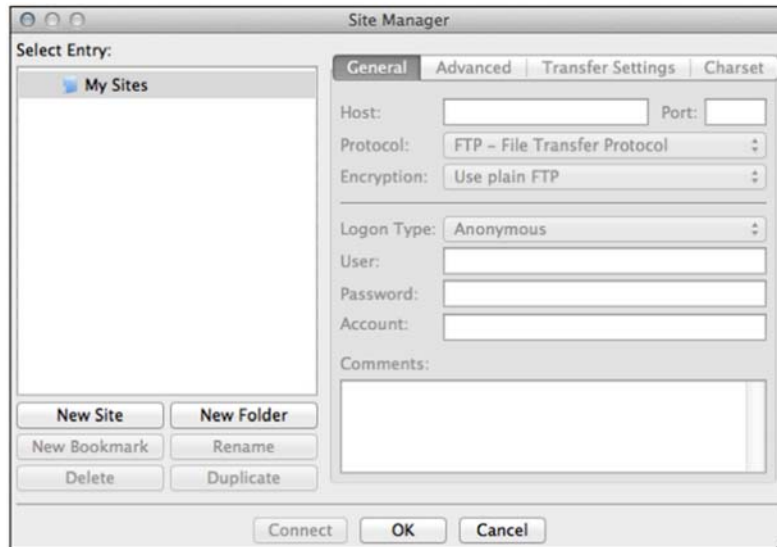


**Figure 6: Represented the FileZilla FTP Client Software**

If you use an FTP client other than FileZilla, the procedures and appearance of the program are different from what I've described in this chapter. For the particular FTP client software you use,

modify your procedures and training. A web server connection is a rather simple operation. But first, you must have the FTP configuration from Step 4 in the section above. then adhere to these simple instructions to connect to your central server using the FileZilla FTP client:

- a) Launch the FTP client software on your local computer.
- b) Choose File ⇌ Site Manager to open the Site Manager, as shown in Figure 7.



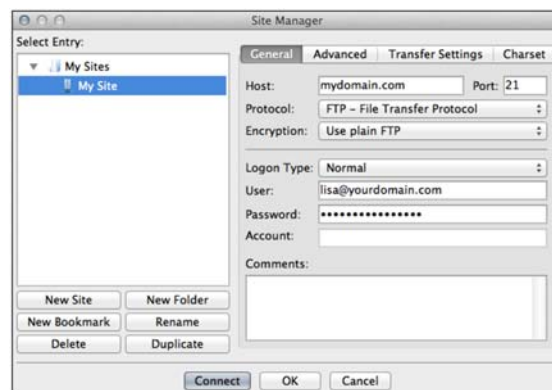
**Figure 7: Illustrated the Site Manager in FileZilla.**

**Click the New Site button and name your site.**

You may give the new website a name to make it easier to remember. As it is not included in the connection credentials that you add in the next stages, you are free to choose any name for this site.

**Enter the FTP server in the Host text field.**

When you set up the FTP membership on your web server, the host's name was given to you along with the FTP server information. I entered "mydomain.com," your real domain name, in the Host text box as seen in Figure 8, which is my FTP server.



**Figure 8: Illustrated the FileZilla Site Manager with FTP account information.**

**Enter the FTP port in the Port text field**

I have port 21. Always double-check your port number and put it in the Port text box, as illustrated in Figure 8, since FTP typically uses port 21 and SFTP (secure FTP) uses port 22 in most hosting situations (check with your web host about which protocol you should be using).

**Choose FTP File Transfer Protocol from the Protocol drop-down list and then choose Normal in the Logon Type drop-down list.**

**Type your username in the User text field and then type your password in the Password text field.**

This is the username and password given to you in the FTP settings. For example, my username is lisa@yourdomain.com, and my password is {W? \$s ((7Tqi.

**Click the Connect button**

It establishes a connection with your web server. The FileZilla FTP client window displays the directory of files and directories from your local computer on the left and the directory of documents and folders from your web server on the right [11]. Now you can take advantage of all the tools and features FTP offers.

**Transferring files from point A to point B**

Transferring files between your local computer and web server is really simple once they are linked. You may explore the directories and subdirectories on your computer system on the left and the directories and files on your central server on the right inside the FTP client programme. Drag-and-drop functionality provided by FTP clients makes it simple to move files from your PC to your hosting account. There are two methods for moving files. The terms they refer to and how to utilize them are as follows:

- a) **Upload:** When you do this, you typically upload things from your computer system to your web server. To upload a document from your machine to your web server, click the file you wish to transfer from someone local computer and drag it over to the right side of the web server side.
- b) **Download:** Downloading files from a web server to a local computer is referred to as downloading files. To download a file form your web server to one’s local computer, click the file you wish to transfer from it and drag it over to the left side of the local computer side.

To back up files to your local computer, it is effective, simple, and sensible to download them from your web server. It's usually a good idea to safeguard your personal information, particularly theme and plugin files.

**REFERENCES**

- [1] M. Boettcher and M. T. McManus, “Choosing the Right Tool for the Job: RNAi, TALEN, or CRISPR,” *Molecular Cell*. 2015. doi: 10.1016/j.molcel.2015.04.028.
- [2] K. R. Sundar, “Virtual care: Choosing the right tool, at the right time,” *Ann. Fam. Med.*, 2021, doi: 10.1370/afm.2693.

- [3] D. P. Ivanov, B. Coyle, D. A. Walker, and A. M. Grabowska, "In vitro models of medulloblastoma: Choosing the right tool for the job," *Journal of Biotechnology*. 2016. doi: 10.1016/j.jbiotec.2016.07.028.
- [4] A. Scheben, J. Batley, and D. Edwards, "Genotyping-by-sequencing approaches to characterize crop genomes: choosing the right tool for the right application," *Plant Biotechnology Journal*. 2017. doi: 10.1111/pbi.12645.
- [5] R. Negarandeh and R. Beykmirza, "Quality assessment in systematic reviews: The importance of choosing the right tools," *Nursing Practice Today*. 2020. doi: 10.18502/npt.v7i3.3342.
- [6] K. T. Powers and M. T. Washington, "Eukaryotic translesion synthesis: Choosing the right tool for the job," *DNA Repair*. 2018. doi: 10.1016/j.dnarep.2018.08.016.
- [7] C. Ivey and J. Crum, "Choosing the right citation management tool: EndNote, Mendeley, RefWorks, or Zotero," *J. Med. Libr. Assoc.*, 2018, doi: 10.5195/jmla.2018.468.
- [8] A. Jordan, C. Regnard, J. T. O'Brien, and J. C. Hughes, "Pain and distress in advanced dementia: Choosing the right tools for the job," *Palliat. Med.*, 2012, doi: 10.1177/0269216311412227.
- [9] "Social networking for business: choosing the right tools and resources to fit your needs," *Choice Rev. Online*, 2010, doi: 10.5860/choice.48-1577.
- [10] A. L. Rowe and N. J. Cooke, "Measuring mental models: Choosing the right tools for the job," *Hum. Resour. Dev. Q.*, 1995, doi: 10.1002/hrdq.3920060303.
- [11] M. Irving, E. Lanitis, D. Migliorini, Z. Ivics, and S. Guedan, "Choosing the Right Tool for Genetic Engineering: Clinical Lessons from Chimeric Antigen Receptor-T Cells," *Hum. Gene Ther.*, 2021, doi: 10.1089/hum.2021.173.



## CHAPTER 6

### EDITING FILES BY USING FTP

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There may be times when you need to modify files that are stored on your web server. The techniques I mentioned previously may be used: A file may be downloaded from your web server, opened, changed, saved, and then uploaded again. However, you may utilise the built-in editing functionality included in the majority of FTP client software by doing the following:

- a) Locate the file you wish to modify after establishing an FTP connection to your web server (optional).
- b) **Right-click the file and to choose View/Edit to access the internal FTP editor [1]–[3].**

Keep in mind that I'm using FileZilla for this example. This command could be known by a name like Open or Edit in your FTP client. Typically, the FTP client edits the files using a tool that is already installed on your computer, such Notepad (Windows) or Text Mate (Mac). It sometimes could have its own integrated text editor dependant on the FTP client program. A text-editing application that is already installed on your computer is used by FileZilla.

- c) **Modify the file as desired, save the changes by selecting File Save or clicking the Save button, and then re-upload the file to your web server.**

Once you save the file, FileZilla displays a box informing you that the file has been modified and requesting your permission to reupload it to the server.

- d) **Choose Yes from the menu.**

The old file is replaced with the newly modified one.

Really, that is all there is to it. To modify, save, and reload files as necessary, use the FTP edit function. As you modify files using the FTP edit tool in a live environment, the changes you make when you save and re-upload a file are applied right away and have an impact on your live website. For this reason, before making any modifications, I always firmly advise downloading a duplicate of the original file to your own computer. As a result, you will always have a duplicate of the original content to rapidly re-upload in case you accidentally make a mistake in the saved file as well as your website goes berserk.

#### Changing file permissions

Every file and folder on your web server do indeed have a set of characterizations, or rights, that are given to them and provide the web server with three pieces of information. On the most basic level, these permissions consist of:

- i. **Read:** Determines whether the file/folder is readable by the web serve
- ii. **Write:** Determines whether the file/folder is writeable by the web server

- iii. **Execute:** Determines whether the file/folder is executable by the web server

Each set of permissions has a numerical code assigned it, identifying what type of permissions are assigned to that file or folder. There are a lot of them, but here are the most common ones that you run into and deal with when running a WordPress website:

1. **644:** Files with permissions set to 644 are readable by everyone and writeable only by the file/folder owner.
2. **755:** Files with permissions set to 755 are readable and executable by everyone, but only writeable by the file/folder owner.
3. **777:** Files with permissions set to 777 are readable, writeable, and executable by everyone. Don't use this set of permissions, for security reasons, on your web server unless absolutely necessary.

Generally, your web server's directories and files have been given rights of either 644 or 755. If PHP Safe Mode is enabled on the web server, you often see PHP files with permissions set to 644. Since you often don't need to fiddle with file rights on your web server, I'm just going to give you a very basic overview of file permissions here. Here's an excellent resource on file permissions from Elated in case you need to go more into this subject: [www.elated.com/articles/understanding-permissions](http://www.elated.com/articles/understanding-permissions).

You can encounter a scenario where you're required to modify and alter the file permissions on a certain file on your web server. This often occurs while working with plugin or theme files on WordPress websites. This procedure is also known as Change Mode, or CHMOD. You'll understand what she means when she says, "You need to CHMOD that file to 755"[4]. A file's permissions may be changed on your web server by using your FTP application in the following short and simple steps:

**Connect your FTP client to your web server and then locate the file you want to CHMOD.**

**In FileZilla, right-click the file on your web server and choose File Permissions to open the file attributes.**

Your FTP client may use different terminology. The Change File Attributes dialog box opens, as shown in Figure 1 [5]–[7].



**Figure 1: Illustrated the Change File Attributes dialog box in FileZilla.**

**Type the correct number in the Numeric Value text field.**

This is the identifier for the file permissions you wish to grant. The plugin or theme creator will normally provide you instructions on what rights number to give the file or folder, and typically, it's either 644 or 755. Figure 5-9 displays the permissions as being assigned with the number 755.

**Click OK.**

The file saves with the new permissions assigned [8], [9].

**REFERENCES**

- [1] R. Rahim et al., "Prototype file transfer protocol application for LAN and Wi-Fi communication," *Int. J. Eng. Technol.*, 2018, doi: 10.14419/ijet.v7i2.13.16917.
- [2] S. Hunter et al., "InterPro: The integrative protein signature database," *Nucleic Acids Res.*, 2009, doi: 10.1093/nar/gkn785.
- [3] A. L. Imoize, K. Orolu, and A. A. A. Atayero, "Analysis of key performance indicators of a 4G LTE network based on experimental data obtained from a densely populated smart city," *Data Br.*, 2020, doi: 10.1016/j.dib.2020.105304.
- [4] P. Vretanos, "OpenGIS Web Feature Service 2.0 Interface Standard – With Corrigendum," OGC 09-025r2, 2010.
- [5] A. Rambaut and N. C. Grassly, "Seq-gen: An application for the monte carlo simulation of dna sequence evolution along phylogenetic trees," *Bioinformatics*, 1997, doi: 10.1093/bioinformatics/13.3.235.
- [6] I. Muhammad Nurdin and A. Fadlil, "Identification of Feasibility of Canned Based Foods Image Processing Techniques Using Thresholding," *Bul. Ilm. Sarj. Tek. Elektro*, 2021, doi: 10.12928/biste.v3i1.1608.
- [7] Januar Al Amien and Doni Winarso, "ANALISIS PENINGKATAN KINERJA FTP SERVER MENGGUNAKAN LOAD BALANCING PADA CONTAINER," *J. FASILKOM*, 2019, doi: 10.37859/jf.v9i3.1667.
- [8] D. Stiawan, M. Y. Idris, R. F. Malik, S. Nurmaini, N. Alsharif, and R. Budiarto, "Investigating Brute Force Attack Patterns in IoT Network," *J. Electr. Comput. Eng.*, 2019, doi: 10.1155/2019/4568368.
- [9] W. Humphrey, A. Dalke, and K. Schulten, "VMD: Visual molecular dynamics," *J. Mol. Graph.*, 1996, doi: 10.1016/0263-7855(96)00018-5.

## CHAPTER 7

### CHOOSING GRAPHICS AND SOFTWARE RESOURCES

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The word "designer" now refers to a wide range of activities in the field of web design. A graphic designer has the skills and imagination to make new graphics from start or to change already-existing images or graphics using image-editing software to meet a specific purpose. Some web designers are skilled in manipulating photographs and photos to put on websites for appealing visual presentations without necessarily creating any graphic designs. This chapter examines some of the best-known graphic-editing programs on the market, including Corel Paint Shop Pro, Adobe Photoshop, and Illustrator, as well as several excellent and reasonably priced image and graphic materials to add to your toolkit. Also, you learn the distinctions between different picture formats and how to optimize photos for websites so that pages load more quickly and the images seem clear and tidy.

#### Exploring Image Types and Formats

When choosing a graphics software package to employ for your web design projects, you should decide what kind of graphic work you'll be doing for them. Graphics software packages are expensive. There are three typical categories for web designers, and your design approach may fit into one, two, or all three of them:

**Graphic designer:** When you develop all the visuals you use from scratch, you may classify yourself as an illustrator. You begin with a blank canvas and build your own distinctive artwork using various tools and methods in your preferred image-editing program [1].

**Graphic manipulator:** You're a master at editing images or photographs that were taken by someone else so that you may utilize them in your web design projects. If you're dealing with vector graphics, which are described in the following section, you may modify things like colors and sizes as well as the forms and locations of the various parts of a graphic by using a variety of tools and methods.

**Graphic consumer:** You are someone who acquires pictures from websites (see my list of websites later in this chapter) and uses them to enhance your online projects with color and visual design components.

As I said earlier, whether you fall into one, two, or all three among those categories when developing themes for websites, it is totally okay as long as you respect copyright and regulatory requirements on the graphics you use if you're a manipulator and/or consumer of graphics. Understanding the many visuals, you might employ to achieve your objectives for your web design projects is also crucial. To assist you understand the sorts of graphics you need to utilize for various applications, the following sections discuss various graphic types and file formats [2].

#### Comparing Raster and Vector Images

The two kinds of graphics you'll most likely use in our job as a graphic designer are raster and vector. You will probably deal with raster graphics as a web designer, while you may also use

vector images. The kind of image file you're dealing with determines the software package you use to edit and produce images. The key distinctions between raster and vector images are listed below:

**Raster:** The hundreds of tiny dots, or pixels, that make up these pictures. Rich, full-color photos and photographs are possible because each pixel may have a distinct color. A raster-based editing application, like Corel's Paint Shop Pro or Photoshop, is required to create and modify raster images.

**Vector:** Rather of using pixels, these representations are composed of curves. Four vector points make up a vector picture, one in each corner, and curves are used to link the points. The curves may then be filled with color and effects at that point.

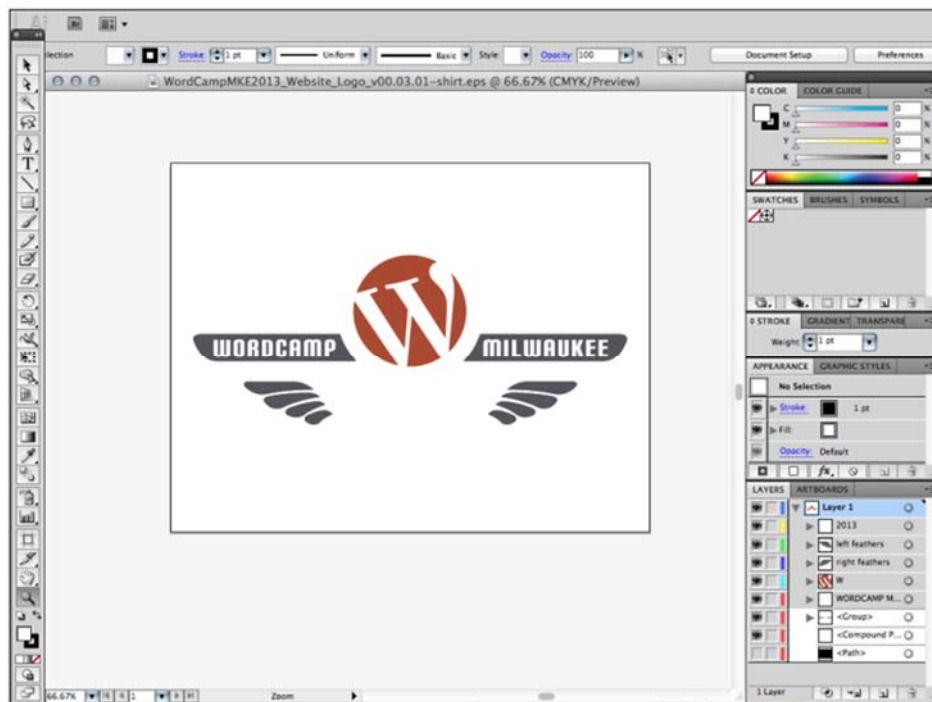
The usage of raster and vector pictures in web designs is covered in greater depth in the sections that follow.

**Raster images:** Raster images are commonly employed for web design and display on websites, including graphics and photographs used in website theme design. Raster pictures don't scale well; if you attempt to make the image bigger or smaller, the quality of the image suffers noticeably since the pixels are shrunk and the image appears grainy. Since raster graphics are flat with no more than one layer, it might be challenging to change some of the many image components inside a graphic file. Nonetheless, since they often have a tiny file size and don't need a considerable amount of bandwidth to transport, raster graphics load rapidly when used online. A raster picture file open in Photoshop is shown in Figure 1. There is just one layer for this raster picture, called Background, on the right side's Layers tab. Raster image file types often used include JPG, GIF, and PNG [3], [4].



**Figure 1: Illustrated the Raster Image in Photoshop.**

**Vector images:** For print design, such as printed materials, brochures, magazine advertising, and billboards, vector pictures are often employed. Vector graphics may be scaled without losing quality since they are comprised of curves rather than static pixels. A vector picture may be scaled up to fill the side of a big truck or down to the size of a postage stamp, and the image quality will not change. Because of this, vector pictures are excellent for logos and print projects. Generally, vector photographs are layered; each part of the image has its own layer, enabling you to edit and alter the various components inside the vector image file using your preferred vector image editor, such as Illustrator. You should utilize raster pictures rather than vector images for showing on a website since the file sizes of vector images might get fairly enormous. For your web design job, you may start with a vector file and then save the finished piece in a raster format that is best for the web. Picture 2 shows an Illustrator-opened vector image file. There are a number of layers accessible for tweaking on this specific picture under the Layers tab in the bottom right. Vector picture files are often stored in the AI, EPS, and CDR file types.



**Figure 2: Illustrated the Vector Image file with Layers Open in Illustrator.**

### Looking at image file formats

You must comprehend the many photographic file formats you will use while creating for the web before I get through into best graphic-editing software. Raster file formats, which are smaller in size and exhibit richer colors, should be used for any images, including photography and logos, that you store and distribute on your website. The size of raster pictures is determined by compression, and you will learn what kinds of data formats you may employ in your own projects in the sections that follow.

### Understanding compression

Raster pictures used in web design must be compressed to a certain extent in order to reduce the size of the file. When you save a vector graphic file as a JPG, GIF, or PNG, image compression



takes place. To make an image load more quickly on a website, files might be compression to reduce their size [5].

The longer it takes for a picture to load on your website, the higher its file size. Depending on the file type you've selected for your picture file, there are two main algorithms that may be used to compress image files. Compression for digital picture files might take place in one of two ways:

**Lossless compression:** Zero quality loss from the original picture file is often achieved using lossless compression, which keeps all data from either the image file both before and after compression.

**Lossy compression:** This decreases the dimension of an image file by either deleting specific data from the original file or by merging related portions of the picture. Typically, the original file's picture quality is lost as a consequence.

### Determining which file types to use for your projects

The six typical file formats you'll need for web design, together with the file type and compression, are shown in Table 1. Despite the fact that the final image files you save and use for your web design work should be raster, you may start with vector pictures to modify and transform graphics to meet the demands of your web design projects.

**Table 1: Illustrated the Image File Format, Compression, and Type.**

Sr. No.	Image File Format	Image File Type	Compression Type
1.	JPG	Raster	Lossy
2.	GIF	Raster	Lossless
3.	PNG	Raster	Lossless
4.	AI	Vector	N/A*
5.	EPS	Vector	N/A*
6.	CDR	Vector	N/A*

Here are the three main vector image formats that you'll probably come across in your work with graphic design:

1. **AI:** Adobe Illustrator, a proprietary file developed by Adobe for representing vector images.
2. **EPS:** Encapsulated PostScript vector image format.
3. **CDR:** CorelDraw proprietary graphic file developed by Corel for representing vector images.



Consider the qualities of each raster image file format before selecting one to employ in your project. The file formats provide varied levels of colour in addition to various forms of compression. The three most popular raster image file formats have the following features [6], [7]:

1. **JPG:** For pictures and other tiny images used in commercial web design projects, this format is ideal. While lossy compression is used by the JPG format, you may choose how much compression is applied when you save the file. From 1 to 100 compression levels are available, and levels 1 through 20 often result in little picture quality loss.
2. **PNG:** Larger web design visuals like the logo or principal header image that establishes the brand and the website's overall aesthetic are better suited to this format. Since PNG employs lossless image decompression, which prevents data loss during compression, the resulting picture is clearer and sharper. In contrast to JPG files, PNG files may be thought to be produced on transparent canvases. JPG files must have a white painting (background), or another color you've chosen, at the very least.
3. **GIF:** A GIF file is compressed without losing any quality, preserving the image's original design. GIF files can only have 256 colors, however. GIF isn't the best format to use for pictures with more colors; use PNG instead.

## Exploring Graphic Design Software

In the parts that follow, I'll introduce you to four software tools that graphic designers use to make graphics and modify photos as well as some helpful resources you can use to learn more about the software programmes I've just introduced. The cost of graphic design software may be high, but the programmes I describe in this section all have free trials available so you can check them out before you purchase them. I advise doing this to make sure the programme is right for you. The programme you use for a given picture depends on the kind of image file or format you're dealing with. A raster-based software is required for raster images, while a vector-based application is required for vector pictures [8].

### Using raster-based Software

Photoshop and Paint Shop Pro are the two raster-based graphic software packages most often used by designers. While these applications also support vectors, they aren't renowned as vector editors, and the vector features they provide are relatively constrained. You must have at least one of these two applications on hand while working with raster graphics in order to develop your designs.

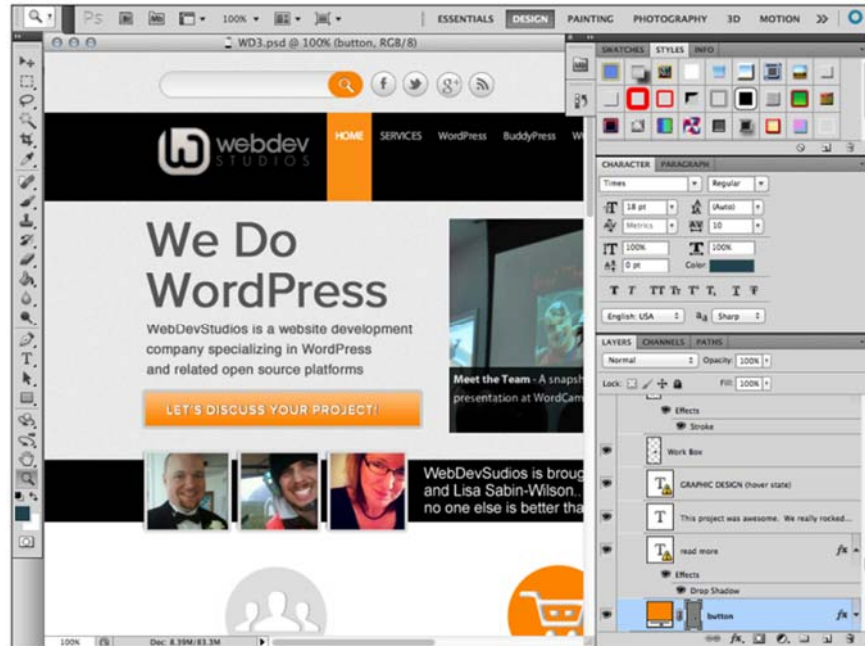
### Adobe Creative Cloud

Photoshop represents the most popular software for raster pictures while Illustrator is the most important application for editing and working using vector images. Both are offered by Adobe Systems, which also offers a number of graphics software and design software packages. You can find everything that you require online with Adobe's Creative Cloud at [www.adobe.com/products/creativecloud.html](http://www.adobe.com/products/creativecloud.html). A new Creative Cloud subscription costs \$49.99 per month, yet there are numerous alternative less expensive options that could also be a good fit for you.

The most widely used file type among graphic and web designers who use Photoshop is a PSD file. A PSD file is a single picture file with many layers that each include text and sophisticated visual effects that together help compensate the whole image. PSD files are often used in the

creation of comprehensive website designs. One file may include the entire design layout for a web page. Next, using several layers and aspects, you can produce a single, flat raster photograph that will be used throughout the design.

Photoshop shows a PSD file in Figure 3. The layers that make the entire file are located on the Layers tab's bottom-right side. The website project I prepared for one of my clients is indicated by the PSD file in Figure 3. Anyone may update or edit any of the graphics in a PSD file at any moment, then save the revised graphic as a csv document in JPG, PNG, or GIF for usage on the web.



**Figure 3: Illustrated the PSD file in Photoshop.**

To assist you in creating effects and visual design components, Photoshop offers a number of tools created by either Adobe or third-party developers.

1. **Plugins:** These little add-on applications made by Adobe or independent developers provide Photoshop additional functions and effects. An example of this is the selection of Photoshop plugins offered by Alien Skin.
2. **Brushes:** You may get some excellent effects by using the Paintbrush tool in Photoshop with these little images made by Adobe or other creators [9].
3. **Patterns and textures:** You may add intriguing textures and patterned effects to your graphic design by employing these little graphic files produced by Adobe or other artists.

Also widely recognized for its built-in picture editing and enhancement features is Photoshop. Photoshop is often used by photographers for this reason, and as a web designer, you may benefit from its photo-editing features to optimize and optimize images for your website designs. Check out Barbara Obermeier's *Photoshop CS6 All-in-One for Dummies* (Wiley) or any of the internet resources mentioned in Table 2 if you want to learn more about how to use Photoshop.

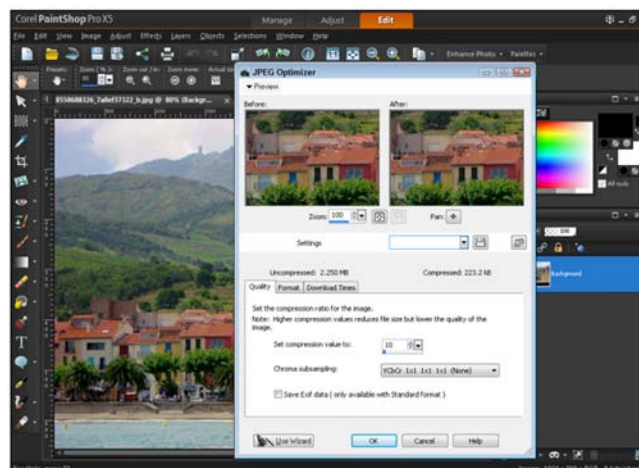
**Table 2: Illustrated the Online Photoshop Resources**

Sr. No.	Resource Name	Description
1.	Photoshop.com	The official Photoshop store, which offers tips, lessons, and resources like brushes and textures that you can discover and download: <a href="http://photoshop.com">http://photoshop.com</a>
2.	PsdTuts+	A well-known site that offers Photoshop lessons for users with varying levels of skill and knowledge: <a href="http://psd.tutsplus.com">http://psd.tutsplus.com</a>
3.	Planet Photoshop	Planet Photoshop is a website with a variety of reviews, tools, and lessons for Photoshop.

### Corel Paint Shop Pro

The Paint Shop Pro X5 image and picture editing programme is offered by Corel, which is well-known for its collection of graphic-editing and photo manipulation tools, and is freely accessible to buy and download at <http://corel.com>. Downloads of Paint Shop Pro are available as a standalone application (\$49.99) or as a part of the more comprehensive Paint Shop Pro X5 Ultimate software package (\$59.99), which includes a number of digital images, photo-editing, and design tools. Corel Paint Shop Pro is only now accessible via Windows.

Figure 4 demonstrates how you may regulate how much compression is used when saving JPG images in Paint Shop Pro. I apply a compression level of 10 to the image I'm storing in the figure. This level of compression strikes a decent balance between file size reduction and the preservation of the majority of the original picture quality. Before saving the compressed picture, Paint Shop Pro enables you to preview it so you may check the level of compression and make any adjustments.



**Figure 4: Illustrated the Compressing and saving a JPG file in Paint Shop Pro.**

You may improve Paint Shop Pro's feature set for techniques and methods that you can use to

produce and modify pictures by purchasing a variety of add-on tools and utilities, which include the following:

**Plugins:** The functions of the application are expanded by these add-on programmers created by Corel or independent developers. You may utilize the plugins from Photoshop and Paint Shop Pro together since they are interoperable.

**Masks and tubes:** Masks and tubes are little picture files that Corel or other designers have produced that you may use in your projects to add various image effects and visuals.

**Brushes and textures:** You may add various effects and features to your design work using brushes and textures, which are tiny picture files made by Corel or other artists.

**Table 3: Illustrated the Paint Shop Pro Online Resources.**

Sr. No.	Resource Name	Description
1.	Corel Resources page	Contains tutorials, tips, and tricks: <a href="http://www.corel.com/servlet/Satellite/us/en/Content/1152796555465">www.corel.com/servlet/Satellite/us/en/Content/1152796555465</a>
2.	PaintShop Pro Forum	PaintShop Pro forum: <a href="http://forum.corel.com/EN/viewforum.php?f=56">http://forum.corel.com/EN/viewforum.php?f=56</a>

Table 3 lists a few Paint Shop Pro resources that you may use to broaden your knowledge and hone your skills, such as downloadable add-ons, seminars, and discussion groups.

### Using vector-based Software

With editing software that is based on vectors, you may produce high-quality vector drawings and sketches that can later be exported in raster image for usage on the web. To start creating vector pictures, many artists, cartoonists, and logo designers use vector editing software. Illustrator and CorelDraw are two of the most used vector-based editing software tools. To fully use all the editing tools and functionalities, you must have a vector-based editing application, regardless of whether you proofread existing vector files or generate new vector files from start. Many layers in vector graphic files often include intricate and detailed design features that enhance the final picture. You cannot increase the number of layers accessible in a vector graphic using applications like Photo editing or Paint Shop Pro, which I discussed in the section above [10].

### Adobe Illustrator

A application called Illustrator is used to create and modify vector images. It is a component of Adobe's Creative Cloud and is accessible at <http://creative.adobe.com>. An existing vector file may be opened in Illustrator and quickly modified by identifying the layers that are already there. The identical file is shown in Figure 5 with Photoshop open; the Layers tab does not display the various layers because Photoshop smoothes the picture. The many layers are preserved by Illustrator for editing and modification.



**Figure 5: Illustrated the Vector Illustration in Photoshop, which shows only one layer.**

The AI and EPS file formats are the ones you deal with and encounter the most while using Illustrator. These are vector picture files that Illustrator makes it simple to access and manipulate. Consider out Adobe Creative Suite 6 Design & Web Professional All-in-One for Dummies by Jennifer Smith, Christopher Smith, and Fred Grantable (Wiley) or one of the helpful online resources in Table 4 to learn more about using Illustrator for design purposes.

**Table 4: Illustrated the Illustrator Online Resources**

Sr. No.	Resource Name	Description
1.	N.Design Studio	Illustrator tutorials from the talented designers at N.Design Studio: <a href="http://www.ndesign-studio.com/tutorials">www.ndesign-studio.com/tutorials</a>
2.	Vectortuts+	A site filled with tutorials, tips, and tricks: <a href="http://vector.tutsplus.com">http:// vector.tutsplus.com</a>

## CorelDRAW

The CorelDRAW Graphics Package X6 includes CorelDRAW, a vector-based editing programme. Only Windows is presently supported by CorelDRAW. By adjusting the accessible layers included inside the vector image file, CorelDRAW, like Illustrator, enables you to create and modify vector-based pictures.

To modify anything in the application, click the component or curve to make it interactive on your authoring screen so you may alter it to your satisfaction by applying various effects. Regular vector

file formats for images, such as AI and EPS, as well as the CDR-exclusive vector format for Corel, are both simple to open. You may discover some useful online resources in Table 5 to learn more about someone using CorelDRAW to create and modify vector pictures.

**Table 5: Illustrated the Illustrator Online Resources**

Sr. No.	Resource Name	Description
1.	Association of CorelDRAW Professionals	Includes newsletters, an online magazine, tutorials, tips, and advice from other users:  <a href="http://www.coreldrawpro.com">www.coreldrawpro.com</a>
2.	Graphics Unleashed	CorelDRAW books and online training classes:  <a href="http://www.unleash.com">www.unleash.com</a>

### Using Online Image-Optimization Tools

I suggested four image-editing software packages earlier in this chapter that you, the designer, might use to edit and transform photos for use in your web designs. These picture apps allow you to maximize file compression without sacrificing image quality. What do you do, however, if a customer requests that you show them how to compress their photographs but they don't have accessibility to the same program you have? You may provide your customers advice on a few simple online tools to assist them compress the photos so that their website load time is as short as possible. Your clients will utilize their WordPress website to add pictures and images inside their blog posts and pages. You may utilize the following cool, free, internet tools for picture optimization with your clients:

**Dynamic Drive:** You may upload a picture from your computer or enter the web link of the image you wish to compress. You may choose PNG, GIF, JPG, or all three as the output format for your images using the image optimizer. Right-clicking the photographs and selecting Save Image As will often save the optimized, compressed images to your local computer for subsequent usage on your website.

**Yahoo! Smush.it:** You may upload a picture from your computer or input the image's URL using the Yahoo! Smush.it application, and it will optimise and compress the image before making it accessible for download. Smush.it also provides feedback on the effectiveness of the picture compression by providing percentages indicating the degree to which it was able to smash or compress your image [11].

**Image Optimizer:** Another free online tool, Picture Optimizer, resizes and compresses your photos so that they may be downloaded and used on your website. Instead of utilising the Image Optimizer webpage to compress your photographs, you may alternatively get it as a program that you can download to your computer and use locally.

**Web Resizer:** Like the other programmer, Web Resizer lets you upload a picture, which it then compresses and makes accessible for downloads to your computer. Further image-editing features



offered by this application include cropping, resizing, adding borders, and altering the image's hue and contrast.

### **Finding Online Image Libraries**

Get some excellent picture and photo resources to add to your web design toolkit once you've assembled your graphic- and image-editing software applications and are knowledgeable about the various sorts of image files you're dealing with.

When prospective buyers ask you to build their websites, they often give users some basic guidelines or specs that those who hope you can meet. Color palettes, style, and format, together with features and content, as well as photographs for logos, features of the application, and design components, are all part of these criteria. If you're fortunate, your customer will provide their picture files to you in a state that is ready for usage. If not, they rely on your abilities to either produce such pictures personally or locate appropriate images on websites that provide stock photos and illustrations. Actually, there are many, but the following are the top three that I consider in these circumstances:

**iStockphoto:** A vast collection of stock photos, vector graphics, audio and video clips, and Flash media may be found at iStockphoto. You may create an account and browse the picture file libraries to select the one that best fits you or your customer. Be sure you carefully check the licensing before using any of the files from iStock Photo since they are not free. The Basic license, which includes certain restrictions, is the least expensive of the several licenses offered by iStockphoto. For instance, you are permitted to use an iStockphoto illustration in a website design but not in a theme design that you plan to sell more than once for example, in a premium theme marketplace.

**Dreamstime:** Dreamtime is a well-known provider of digital and stock photos. Create an account to browse its enormous collection of digital picture options. Keep a watch out for free photos that Dreamtime periodically gives. Additionally, you must pay particular attention to the various licenses that Dreamtime offers for its picture assets. One really great feature is its royalty-free licensing choice, which enables you to purchase the image once and use it as many times as you like. However, you cannot distribute the image repeatedly in the same website theme, such as in a single template that is sold to the public on different occasions.

**Vector-Stock:** This website sells images and graphics that are merely available in vector format. Stock photography is not provided here since Vector Stock solely offers vector graphics. To access and utilize these graphics, you need a vector-based editing application like CorelDRAW or Illustrator. The photos you buy and use are subject to licensing, much like other digital image archives and libraries. Be careful to read the license of the image visitors purchase before utilizing it in your web design initiatives.

### **REFERENCES**

- [1] E. Reed, S. Nunez, D. Kulp, J. Qian, M. P. Reilly, and A. S. Foulkes, "A guide to genome-wide association analysis and post-analytic interrogation," *Stat. Med.*, 2015, doi: 10.1002/sim.6605.
- [2] J. J. Jay and C. Brouwer, "Lollipops in the Clinic: Information Dense Mutation Plots for Precision Medicine," *PLoS One*, 2016, doi: 10.1371/journal.pone.0160519.



- [3] A. Suheri, C. Kusmana, M. Y. J. Purwanto, and Y. Setiawan, "Model Prediksi Kebutuhan Air Bersih Berdasarkan Jumlah Penduduk di Kawasan Perkotaan Sentul City," *J. Tek. Sipil dan Lingkung.*, 2019, doi: 10.29244/jsil.4.3.207-218.
- [4] S. Suliswaningsih, A. Junianto, and A. D. Arianto, "Peningkatan SDM Melalui Keterampilan Desain Grafis Sebagai Peluang Usaha Ekonomis Produktif (UEP) Karang Taruna Desa Sokawera," *Madani Indones. J. Civ. Soc.*, 2020, doi: 10.35970/madani.v2i1.87.
- [5] P. C. Lopes, R. L. Rangel, and L. F. Martha, "An interactive user interface for a structural analysis software using computer graphics techniques in MATLAB," *Comput. Appl. Eng. Educ.*, 2021, doi: 10.1002/cae.22406.
- [6] C. Theodoris, T. M. Low, P. Pavlidis, and N. Alachiotis, "quickLD: An efficient software for linkage disequilibrium analyses," *Mol. Ecol. Resour.*, 2021, doi: 10.1111/1755-0998.13438.
- [7] R. C. Bernardes, M. A. P. Lima, R. N. C. Guedes, C. B. da Silva, and G. F. Martins, "Ethoflow: Computer vision and artificial intelligence-based software for automatic behavior analysis," *Sensors*, 2021, doi: 10.3390/s21093237.
- [8] B. R. Kent, "Visualizing Astronomical Data with Blender," *Publ. Astron. Soc. Pacific*, 2013, doi: 10.1086/671412.
- [9] B. Luo and W. Wang, "Graphic Design for Marine Tourism Resources Development: An Experimental Study," *J. Coast. Res.*, 2020, doi: 10.2112/JCR-SI107-006.1.
- [10] K. Osadcha and V. Baluta, "The influence of modern trends in digital art on the content of training in computer graphics and digital design," *Ukr. J. Educ. Stud. Inf. Technol.*, 2021, doi: 10.32919/uesit.2021.01.01.
- [11] E. G. Kim and S. H. Chun, "Analyzing online car reviews using text mining," *Sustain.*, 2019, doi: 10.3390/su11061611.

## CHAPTER 8

### CHOOSING WORDS AND COLORS

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The colour scheme and typefaces that will be utilised on a website are two among the numerous choices you'll have to make, whether it's for your own website or one for a client. In some cases, making these decisions will be simple since you or your customer already have a decided colour scheme and typefaces. Nonetheless, certain design tasks may need fresh judgements about typeface and colour schemes. Since colour scheme is an essential component at the beginning of any design process and because designers are aware that first impressions matter, choosing the ideal colour scheme may sometimes take a lot of effort. Knowing where to go for the appropriate fonts and resources to guide your decision-making offers you a head start. Choosing the appropriate fonts to employ is also a crucial component of building an online presence. The ideas of colour schemes and palettes are covered in this chapter. I provide materials and tools that you may use to create a stunning colour palette. Along with helping you understand font licencing and where to obtain fonts that you may use in your online designs, I also expose you to the fundamentals of typography and web safe fonts [1].

#### Understanding Color

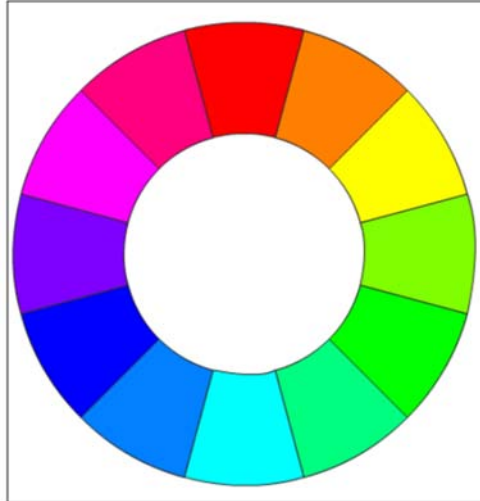
Throughout my more than 10 years working in the web design field, if I've learned anything, it's that different people perceive colours differently. What looks nice to me may not necessarily seem good to you, but also vice versa. Numerous customers have requested me to develop designs based on colour schemes that I'll never forget, simply because I found them to be so deplorable. Yet, since the client loved them, I finished the job knowing that I could leave after it was through and never look at it again.

Color and preferences for color combinations are entirely subjective and depend on what each person thinks looks attractive. According to this proverb, I won't waste your time by telling you which color combinations and hues appear best since such judgements are mostly dependent on personal choice and experience. The parts that follow provide you an overview of fundamental color theory and terminology so that you may choose colors and color schemes with clarity and confidence [2].

#### Checking out the Color Wheel

A red, green, and blue (RGB) color wheel, like the one in Figure 1, is a common feature of graphic design software and websites that use color schemes. The RGB color wheel essentially divides colors into three groups:

1. **Primary colors:** Contains the primary hues of red, green, and blue.
2. **Secondary colors:** Includes hues produced by combining main hues in exactly the same quantities, for as the purple hue produced by mixing red and blue.
3. **Tertiary colors:** Includes hues created by blending primary and secondary colors, including vermillion, cyan (blue-green), and magenta (red-purple) (red-orange).



**Figure 1: Represented the Standard RGB Color Wheel.**

Additionally, you can use the color wheel to discover two main color groups, or schemes:

**Complementary colors:** A set of hues that are on the color wheel in direct opposition to one another. An illustration using the color wheel in Figure 1 would be yellow and blue.

**Analogous colors:** A pair or collection of hues that are closely related on the color wheel. Analogous hues may be seen on the color wheel in Figure 1 such as orange and yellow or red and orange.

A user-friendly online color wheel may be found at [www.colorsfire.com/rgb-color-wheel](http://www.colorsfire.com/rgb-color-wheel). Just click on the color square mostly on left of the wheel to see comparable or equivalent color schemes on the right.

### Examining the RGB and hex color models

The RGB and hexadecimal (hex) systems are the two primary colour models that you'll often work with in web design, with the hex system being the most common way to describe colours in a Cascading Style Sheet (CSS).

### RGB

An electronic device, such as a computer monitor or a mobile device, may show colors using the RGB model. The basis for the RGB color model is the notion that any color can be produced by mixing various shades of red, green, and blue. The RGB color model is the default foundation for color in web design since you're developing for websites that are seen via computer displays and mobile devices [3], [4].

Three integers, one for each of the three components of the RGB color system red, green, and blue are used to describe each color. Each color has a numerical range of 256 brightness levels, which are denoted by the numbers 0-255. By varying the amounts of each individual hue, you may mix and match colors until you discover one you like. Below is what each color equates to using the 0-255 integers and the 256 possible values for each color:

1. **Red:** R: 255 G: 0 B: 0 (255, 0, 0)

2. **Green:** R: 0 G: 255 B: 0 (0, 255, 0)
3. **Blue:** R: 0 G: 0 B: 255 (0, 0, 255)

Fortunately, interactive color wheels make it simple to point and click to mix and match colors to obtain their individual RGB values. Examples include the one in Figure 1 and the ones you may find in your favorite graphics application.

## Hex

Hexadecimal codes, which stand for the colours in the RGB model, are the most widely used method of representing colour in web design. A byte is made up of two hexadecimal values and may represent up to 256 distinct colours.

Keep in mind that there are 256 potential colour values based on the RGB paradigm. Red, blue, and green are each represented by a pair of hexadecimal numbers that combine the digits 0 through 9 with the letters A through F. Hex codes for frequently used colours are included in Table 1. Actually, when I was younger, I discovered a useful mnemonic technique to aid with my memory of the colours of the rainbow (red, orange, yellow, green, blue, indigo, and violet). The hex codes for each hue of the rainbow, as well as the conventional white and black, are provided in Table 1 [5].

**Table 1: Illustrated the Common Colors and Hex Codes**

Sr. No.	Color	Hex Code
1.	White	#FFFFFF
2.	Black	#000000
3.	Red	#FF0000
4.	Orange	#FFA500
5.	Yellow	#FFFF00
6.	Green	#008000
7.	Blue	#0000FF
8.	Indigo	#4B0082
9.	Voilet	#EE82EE

## Creating Color Schemes with Helpful Tools

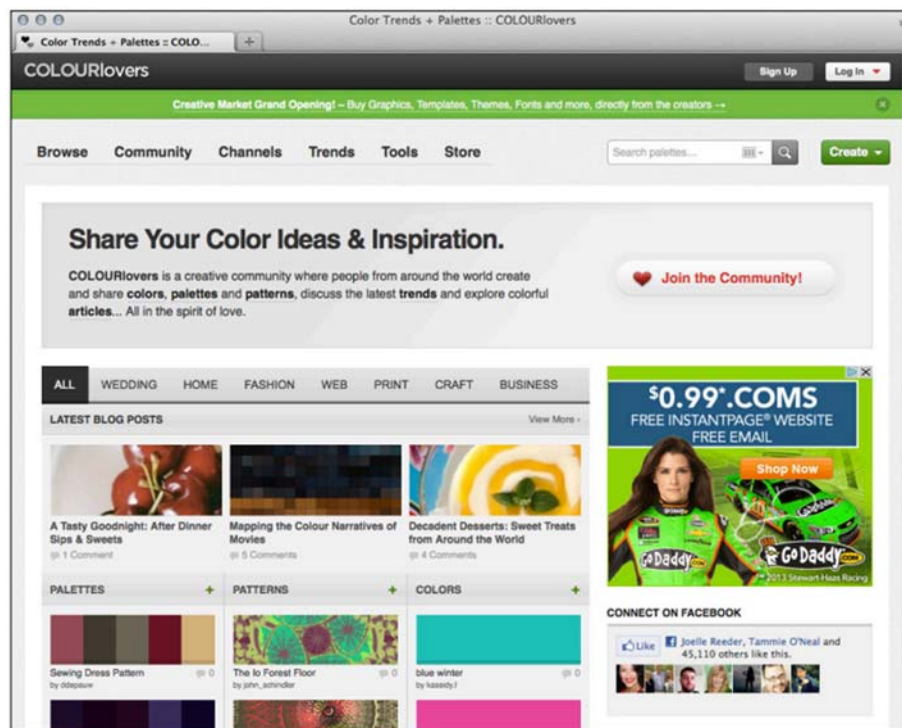
The online color wheel previously mentioned may be used to build a variety of colour schemes, but as will be shown in the following sections, there are additional resources you can use to help you discover the perfect color combination.

## Exploring different color combinations

Here are several online tools and places on the web where I find color inspiration and ideas:

**COLOUR Lovers:** You may browse through millions of various color combinations and palettes on the COLOUR lover's website to utilize in your creations. Figure 2 displays the outcomes of the palettes I discovered by using the search tool to look for the orange hue with the hex code #F8981F. It's a social network built on colors where users of the website post and share their preferred color schemes with other users.

**Figure 2:** Illustrated the Find colors and schemes on the COLOUR-lovers website.



**Kuler from Adobe:** Adobe's Kuler is a web-based tool that lets you share and play around with various color schemes. Members of the Kuler community exchange color schemes and experiment with one another in order to encourage one another's use of color.

**Color-Schemer Studio 2:** A program called Color-Schemer Studio 2 (\$49.99) allows you to mix and match colors to create a color scheme for your website design project. Install the program on your computer by downloading it from the Color-Schemer website. Choose your chosen color schemes using its visual color wheel from there. This program is accessible on both Windows and Mac [6], [7].

## Finding RGB and Hex Codes

Before the design project even starts, you could already have a colour scheme in mind; for instance, if a client brings you her logo and requests that the colour scheme match. Also, I've had customers approach me with a desired colour scheme that they had chosen based on a favourite image or

simply by stating, "I like blue and green together," or "I really like the colours used on that website." In these situations, grab the tools listed below to quickly and simply ascertain the RGB or hex codes of the colours displayed:

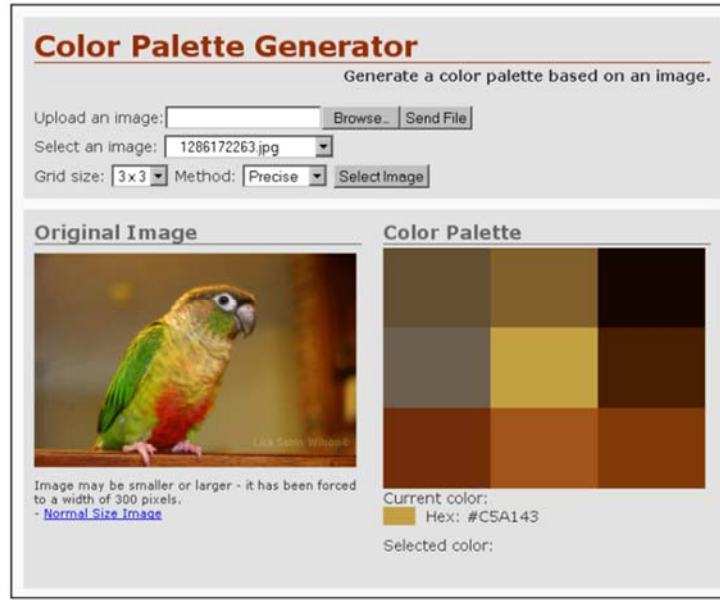
**Color Cop:** Currently only accessible for Windows, Color Cop is a pretty useful little program that you can download from the Color Cop website and download on your PC. The Color Cop icon may be seen on your Windows Quick Launch toolbar after it has been installed. To rapidly choose a colour from a website you're reading in your browser, follow these steps:

- a. **Click the Color Cop icon on your Windows Quick Launch toolbar.** A small Color Cop window opens.
- b. **Click and drag the eyedropper to your desired color location.** The eyedropper symbol is located on the middle of the left side of the window. You can drag the eyedropper to any location on your monitor to select your preferred color.
- c. **Note the RGB and hex codes of your preferred color.** The Color Cop window's upper-left corner displays the RGB code, and the center, just below the primary color box, displays the hex code. I found the color red in the Color Cop window by dragging the eyedropper over it, as shown in Figure 3.
- d. When you're done, close the application by clicking the X button in the top-right corner of the window.



**Figure 3: Illustrated the Use the Color Cop eyedropper to find specific colors from a web page.**

**Color Palette Generator:** A picture may be supplied to this online application, which will analyse it and produce a color scheme depending on the colors it contains. Examples of such images include client-provided logos and photographs with specific color schemes. After the upload of a picture of my parrot, Figure 4 displays the findings of the Color Palette Generator. You can see that the tool provides the primary colors present in that picture, and from there, I can use my mouse cursor to hover over each color to get the precise hex code to apply to that color in my design project.



**Figure 4: Illustrated the Discover colors from a photograph at the Color Palette Generator website.**

**I like Your Colors:** By inputting another website's URL and pressing the "Submit" button, I Like Your Colors enables you to see its distinctive color scheme. After that, I Like Your Colors gives a list of the colors used on the website you choose. When a customer approaches you and says, "I adore the color scheme on Google, I want to utilize that scheme," this is a useful tool. After that, you may input Google's Website to get the precise hex codes for the colors it employs.

If all else fails, you may choose a specific color by dragging a color picker, often known as an eyedropper, across an image in the majority of graphic design and image-editing software. You're equipped with everything you need to design your own color schemes thanks to your graphics application, as well as the resources and knowledge in this chapter.

### Understanding Typography Essentials

Typography, often known as fonts, is the art, design, and aesthetic appeal of the typefaces used in print and digital design. Newspapers, periodicals, greeting cards, billboards, and even websites utilise unique typography in the body of their material as well as in their images and logos [8].

As a web designer, you use typography styling on your website design projects in two ways:

1. **Body content:** These are the typefaces you use for the content, such as scientific publications, pages, posts, and so on, and they include the size, style, and colours. Via the use of style definitions, Cascading Style Sheets (CSS) regulates the typographic styling used in this region. You may learn more about CSS and the font style and spacing used to guarantee simple reading and attractive presentations.
2. **Graphics and logos:** When you design logos, icons, buttons, and other visual elements for a website project, you normally use your favorite design and image-editing tools, such as Photoshop.



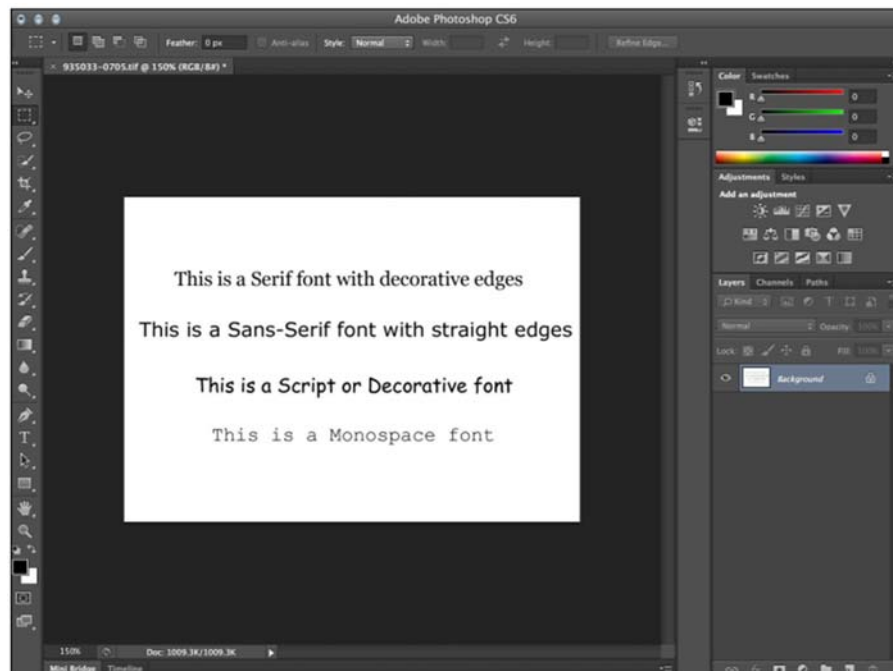
In the following sections, you find out more about different font styles and discover what fonts are considered web-safe.

## Exploring Font Styles

Fonts come in different shapes and sizes and, for the most part, can be grouped into common categories in terms of their style and type:

- a. **Serif:** These fonts have decorative elements, such as tails or curlicues, at the edges of letters.
- b. **Sans-serif:** These fonts have straight edges and don't have decorative elements. Generally, sans-serif fonts are considered easier to read on computer monitors and mobile devices.
- c. **Script or decorative:** These fonts resemble cursive or handwritten type. These are generally not used to display content because they can be difficult to read at small sizes.
- d. **Monospace:** These fonts have letters that are all the same size and width, with no variation. Monospace fonts are typically used to display programming code.

Figure 5 is a simple Photoshop image that depicts these four font types. Hundreds of font styles seem to be available to use in producing graphics, logos, and other design components made in your favorite program, however these classifications of font styles are general styles that relate to typefaces often used in online content. For material on tools, you may use to locate and discover such typefaces, see the section "Finding and Using Fonts for Graphic Design" near the conclusion of this chapter.



**Figure 5: Illustrated the Different font styles applied to text in Photoshop.**

The default font selected in the reader's web browser's preferences is automatically shown if a particular font isn't installed on his machine. Because of this, you must be familiar with the

standard typefaces used by all operating systems to make sure that every reader sees your website the way you intended. Several popular typefaces that are appropriate for usage in style sheets and website content sections are shown in the minitablet below:

### **Finding and Using Fonts for Graphic Design**

The sky's the limit when it comes to the sorts of typefaces you may employ in graphic design, as I said in the section above. There are literally millions or maybe hundreds of thousands of typefaces available on the internet. If you're a fontaholic the same as me, it's easy to become lost in the plethora of font libraries available online when looking for the perfect font to fit your preferences. I lost count of how many hours I spent searching through and admiring various font galleries in search of and often discovering inspiration.

Even if some of the typefaces are exquisite and lovely, not all of them are openly available for usage. Several of them have special licences connected to them that specify the conditions under which you may use them, and some of companions cost money, often a lot of money. Be careful to read the font's licence, which is often included in the download package as a file named license.txt, to ensure that you have complete permission to use the language in your web project. [9].

### **Finding the right fonts for your project**

Here's a quick list of free font resources that have some really great fonts available for download and use:

- a. UrbanFonts.com: [www.urbanfonts.com](http://www.urbanfonts.com)
- b. Google Fonts: [www.google.com/fonts/](http://www.google.com/fonts/)
- c. daFont.com: [www.dafont.com](http://www.dafont.com)
- d. FontFreak.com: [www.fontfreak.com](http://www.fontfreak.com)
- e. Font Squirrel: [www.fontsquirrel.com](http://www.fontsquirrel.com)

You could be forced to bite the bullet and spend money on a few fonts for your web design tasks, or perhaps your customers discover a font that they simply must include in their designs but will have to buy. Many resources for premium fonts are:

- a. Fonts.com: <http://fonts.com>
- b. MyFonts: <http://myfonts.com>

The What-The-Font webpage on the My-Font's website is a last but really effective method for locating the font you want. When you have a typeface but are unsure of its name or where to get it, use this resource. If a customer approaches you and says, "I adore the font on that site; I am interested in employing the same one," this tool will be really useful. Either upload an image viewer containing the desired font or provide the URL for the font's location. After you do, What-The-Font creates a list of potential fonts that are similar to the one you choose. The font is then yours to buy and download to your computer so you can use it in your web design project [10].

## Installing fonts on your computer

Install the font you wish to use on your computer after finding it so that it may be found in the font list of your favorite graphic design tool. By simply double-clicking the typeface file and selecting install, Microsoft makes it simple to install a font on the Windows 8 operating system. Moreover, you have the option to right-click numerous font files to install them all at once. As an alternative, you may adhere to these instructions to install a font on Windows 8:

a) Download the font to your computer and save it in a location you're sure to remember.

b) Unzip the download file

Typically, font downloads are packaged within a Zip file, requiring that you use a popular archiving program, such as WinZip ([www.winzip.com](http://www.winzip.com)), to unzip (uncompress) the file.

c) Save the unzipped file to a location on your computer and right-click the font filename. Font files have a .ttf (TrueType Font) or .otf (OpenType Font) extension.

d) Select Copy.

e) Browse to C:\Windows\Fonts.

f) Right-click inside the C:\Windows\Fonts directory and select Paste.

The font file is transferred from its previous location to your computer's Fonts directory (C:\Windows\Fonts), and a dialogue box appears to confirm that the font is really being installed. After the font installation is complete, the dialogue box closes [11].

## REFERENCES

- [1] C. C. Davoli, F. Du, J. Montana, S. Garverick, and R. A. Abrams, "When meaning matters, look but don't touch: The effects of posture on reading," *Mem. Cogn.*, 2010, doi: 10.3758/MC.38.5.555.
- [2] M. Najafian and S. Ketabi, "Advertising Social Semiotic Representation: A Critical Approach," *Int. J. Ind. Mark.*, 2011, doi: 10.5296/ijim.v1i1.775.
- [3] C. S. Kanani, S. Saha, and P. Bhattacharyya, "EL-BERT at SemEval-2020 Task 10: A Multi-Embedding Ensemble Based Approach for Emphasis Selection in Visual Media," in *14th International Workshops on Semantic Evaluation, SemEval 2020 - co-located 28th International Conference on Computational Linguistics, COLING 2020, Proceedings, 2020*. doi: 10.18653/v1/2020.semeval-1.214.
- [4] M. Abidin, "Strategies for Instilling Educational Values in Islamic Boarding School (IBS)," *Univers. J. Educ. Res.*, 2020, doi: 10.13189/ujer.2020.080928.
- [5] B. Das, S. Mohanty, and N. C. Shil, "Categorizing Consumers' Buying Behavior: A Factor Analysis in Consumer Durable Market," *Int. J. Bus. Manag.*, 2009, doi: 10.5539/ijbm.v3n9p147.
- [6] L. Albertazzi and O. Da Pos, "Color names, stimulus color, and their subjective links," *Color Res. Appl.*, 2017, doi: 10.1002/col.22034.

- [7] K. (Komariah), D. J. Setyono, and A. (Aslimah), “Karakteristik Kuantitatif Dan Kualitatif Kambing Dan Domba Sebagai Hewan Qurban Di Mitra Tani Farm,” *Bul. Peternak.*, 2015, doi: 10.21059/buletinpetermak.v39i2.6712.
- [8] L. C. Foland-Ross et al., “Amygdala reactivity in healthy adults is correlated with prefrontal cortical thickness,” *J. Neurosci.*, 2010, doi: 10.1523/JNEUROSCI.4578-09.2010.
- [9] W. J. Jameel, S. M. Kadhem, and A. R. Abbas, “Detecting Deepfakes with Deep Learning and Gabor Filters,” *ARO-THE Sci. J. KOYA Univ.*, 2022, doi: 10.14500/aro.10917.
- [10] P. Jaiswal and P. D’ Souza, “Study Regarding Conceptualisation of Dermatology Operation Theatre Based on Perception of the Five Human Senses,” *Dermatology Dermat.*, 2020, doi: 10.31579/2578-8949/070.
- [11] . Z., N. M. Dhanawaty, and A. A. Putu Putra, “Variasi Leksikal Bahasa Sasak di Kecamatan Karangasem: Kajian Dialektologi,” *Humanis*, 2021, doi: 10.24843/jh.2021.v25.i02.p09.

## CHAPTER 9

### PLANNING YOUR DESIGN STRATEGY

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Prior to beginning the website design and development processes for each new web design project, you must first respond to a number of initial inquiries. If you are working on something like a design project for a client, get in touch with her to make sure you grasp the specifications before you go further. The same is true if you are working on a project for yourself. To choose your design approach, you must assess the project as a whole in regards to subject matter, type, and purpose. No matter how large or little the project, it's a good idea to start with creating a strong strategy since without one, you're likely to suffer throughout the whole design process. I go through some of the key choices you'll need to make for your project in this chapter, including the sort of layout to utilize, the number of columns to include, and the menu navigation structure. The use of complete material against extracts, the use of images versus thumbnails to give readers a visual element, and the presentation of information in various ways, such as chronologically, by subject, by most popular, and so forth, are some of the other topics I address. Concepts and variables to think about for responsive web design, or ensuring sure your site appears excellent on mobile devices like smartphones and tablets, are also covered in this chapter. Last but not least, I walk you through the process of setting up a local WordPress sandbox programming environment on your computer so you may test and refine your website design prior to actually putting it live on the Internet [1].

#### Choosing the Width of Your Website

Every website begins with a structure that accounts for width. The following are the main widths to take into account while designing your website:

1. **Fixed:** A fixed width is one that is governed by a certain number of pixels. No matter how large or tiny the user's computer display and resolution are, this style of layout remains the same size.
2. **Fluid:** This flexible width is based on percentages and ensuring that your website spans the whole expanse of users' browsers, regardless of how large as well as tiny their monitors or devices with different screen are.
3. **Responsive:** This sort of layout is said to be device-independent. In other words, it doesn't matter what size device a visitor uses in order to surf the website it will look great on anything from extremely big displays to the tiniest cellphones. The reason this design is referred to be responsive is that it adapts to the size of the viewing device.

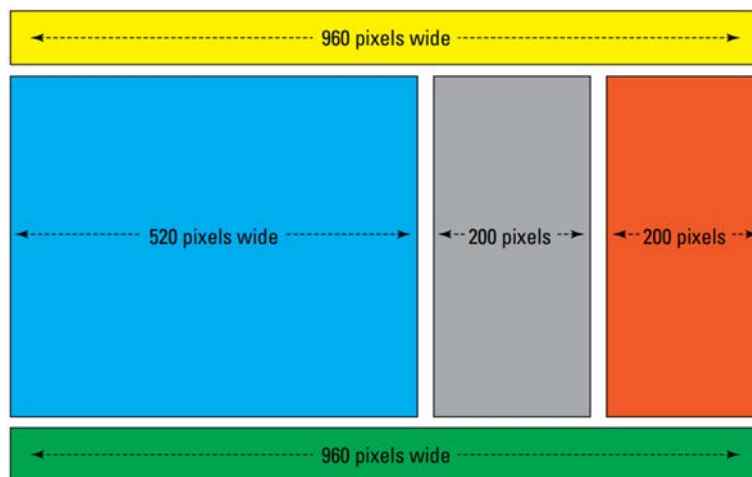
Remember that individuals who visit the web use their browsers in a variety of ways and that computer displays as well as resolutions come in a variety of sizes when deciding between fixed, fluid, and adaptable layouts. Some users totally maximise their interactive format, making them fill the whole screen's height and breadth. Other users do the same actions, but they utilise different

browser extensions and columns in their browsers, which reduces the size of the screen on which your website is shown. With mobile and tablet computers, users who utilise a portrait (vertical) and a geography (horizontal) layout are also common. The challenge for you as a web designer is to make your website adaptive, meaning that it will display properly on any device. Another important consideration is screen resolution, which varies substantially depending on the configuration of each machine used by website traffic [2]. A computer monitor's screen resolution is determined by how many pixels wide and high are used to show information; the higher these figures, the better the resolution. The resolution of 1600 x 900 (or 1600 pixels width by 900 pixels high), for instance, is higher than 800 x 600. The leading website for tools and resources for web designers is W3Schools. It tracks information on which screen resolutions are most and least utilized on the online year over year and publishes the findings to assist designers better understand how people use the Internet. The majority of online users, according to the site's most current data for 2013, utilize screen resolutions higher than 1024 x 768.

Your decision to employ a fixed, fluid, or adaptable layout is heavily influenced by your own or your client's requirements. Some designers have a particular fondness for one layout over another, but as computer monitor sizes increase for desktops and laptops and decrease for mobile devices such as tablets and smartphones, designers are discovering they might be forced to adjust their usual design methods to account for the various screen sizes available. In the paragraphs that follow, I go into further depth discussing responsive, fluid width, and fixed width layout designs, as well as the benefits and drawbacks of each option [3].

### Designing with a fixed width

A fixed-width website does indeed have a container with a predetermined width in pixels, and everything inside of it is confined inside the Cascading Style Sheet's specified width (CSS). No matter the visitor's screen size or resolution, if a fixed width containers is set to 960 pixels, for instance, it won't expand over 960 pixels. So, even if a user views the page at 1600 pixels wide, just a 960 pixels wide container is shown. Figure 1 shows a common 960-pixel-wide design. The site's header and footer are 960 pixels wide, the content area is 520 pixels wide, the two navigation bar are 200 pixels wide, and there is a 20-pixel right margin separating the content area from the first sidebar in the picture.



**Figure 1: Illustrated the sample fixed-width layout at 960 pixels in width.**

The CSS for the layout shown in Figure 1 looks something like this:

```
body {
background: #ffffff;
margin:0;
font-family: arial, verdana, helvetica, sans-serif;
}
#container {
width: 960px;
margin:0 auto;
}
#header {
width: 960px;
height: 100px;
margin-bottom: 20px;
background: #eee;
}
.content {
width: 520px;
margin-right: 20px;
float:left;
background: #eee;
}
.sidebar1 {
width: 200px;
margin-right: 20px;
float:left;
background: #eee;
}
.sidebar2 {
width: 200px;
float:left;
background: #eee;
}
#footer {
float:left;
width: 960px;
height: 100px;
margin-top: 20px;
margin-bottom: 20px;
background: #eee;
clear:both;
}
```

And the HTML markup for the layout in Figure 1 looks like this and corresponds to the preceding CSS example:

```
<!doctype html>
```



```

<html lang="en" class="no-js">
<head>
<meta charset="utf-8">
<title>Your Site Title</title>
</head>
<body>
<div id="container">
<header>This is the Site Header</header>
<div class="content">
<p>This is the content area</p>
</div>
<div class="sidebar1">This is the first sidebar</div>
<div class="sidebar2">This is the second sidebar</div>
<div id="footer">This is the footer area</div>
</div>
</body>
</html>

```

The most common and widely used fixed width layout is 960 pixels wide because website designers build sites predicated on the assumption that 1024 x 768 pixels or above are the most often used screen resolution. Due to the toolbar and scroll bars of the browser, a 960-pixel-wide layout renders flawlessly on a 1024-pixel-wide resolution. You don't want your website visitors to scroll horizontal while reading it, thus anything greater than 960 pixels results in a horizontal scroll bar down the bottom of the browser window. The 960 Grid System website, located at <http://960.gs>, is a useful resource that provides simple Photoshop templates made using a 960-pixel-wide layout [4].

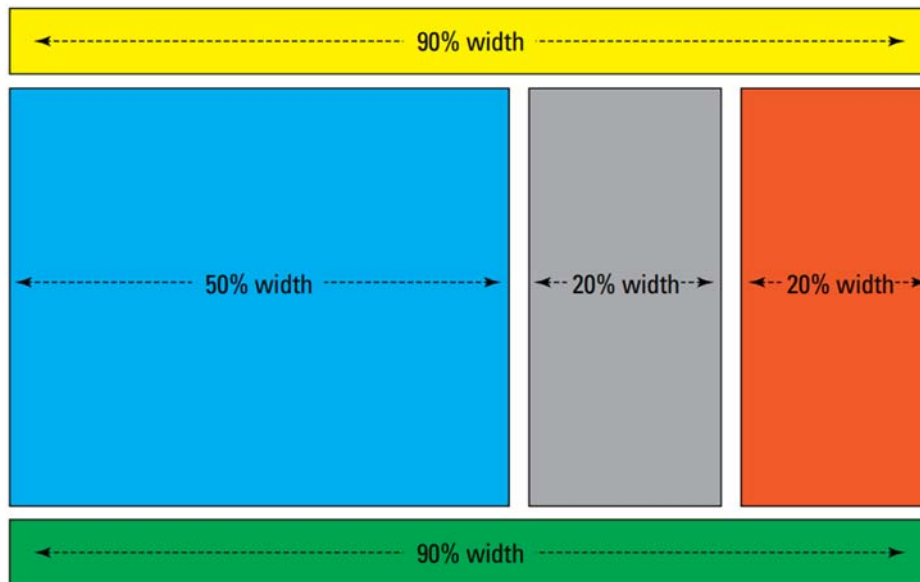
The use of a fixed width layout offers both advantages and disadvantages. The ability to more easily handle design components like images, icons, and banners is one of the main benefits. You can be quite sure that what you see on your laptop screen is what your website visitors see since a fixed width arrangement is set to a static pixel width. It is simple to prepare for the insertion of movies, photographs, and other media components since you are aware of the precise width of the website, and you can be sure that the files will appear appropriately inside the containment of the overall design guidelines [5].

The way a fixed width arrangement appears on bigger computer displays is one drawback. With a monitor that shows material in a 1600 x 950 resolution, a layout that is 960 pixels wide exposes a lot of empty space. You would have 640 pixels of empty space in this scenario. Despite the fact that certain individuals may find this annoying, some designers may still choose to use this approach.

### **Designing with a fluid width**

A website with a fluid width layout may indeed be made to be any width. Instead of using static pixels, the website's content container is controlled by percentages. The fluid width layout may rise or fall in width depending on the visitor's browser's screen resolution, as opposed to the fixed width arrangement that I discussed in the part before. I used a 960-pixel wide example in the

preceding example for the constant width layout; the enclosure of the website is always precisely 960 pixels wide. You may alter the 960 pixels' width to 90% when using a fluid width layout. No matter how large or tiny the browser is, the container always occupies 90% of it. Figure 2 shows a common 90 percent-width design. The site's header and footer are 90 percent wide, the content area is 50 percent broad, the two sidebars are 20 percent wide, and there are margins of 5 percent between the content area and the first sidebar.



**Figure 2: Illustrated the Sample Fluid Width Layout at a 90% Width.**

The CSS for the layout shown in Figure 8-4 looks something like this:

```
body {
background: #ffffff;
margin:0;
font-family: arial, verdana, helvetica, sans-serif;
}
#container {
width: 90%;
margin:0 auto;
}
#header {
width: 90%;
height: 100px;
margin-bottom: 20px;
background: #eee;
}
.content {
width:50%;
margin-right: 5%;
float:left;
```

```

background: #eee;
}
.sidebar1 {
width: 20%;
margin-right: 5%;
float:left;
background: #eee;
}
.sidebar2 {
width: 20%;
float:left;
background: #eee;
}
#footer {
float:left;
width: 90%;
height: 100px;
margin-top: 20px;
margin-bottom: 20px;
background: #eee;
}

```

You can notice the change in layout when you integrate this fluid width CSS example with the HTML code I offer in the previous section. The fluid width layout produces an elastic layout for whom the width fluctuates depending on the size of the visitor's browser window since the width is computed in percentages.

There are several disadvantages to fluid width. The fact that it makes full use of a browser's available space is the most significant. Real estate is almost never wasted. Since fluid width adapts to the visitor's screen resolution, some people believe it improves the user experience. Also, it removes the horizontal scroll bar at the bottom of the browser on screen sizes fewer than 1024 pixels in width, which often occurs with a fixed-width design made for screens higher than 1024.

You should be aware of the several drawbacks that fluid width possesses. Several of these drawbacks are what deter designers from using fluid-width designs. Here are a few of these drawbacks:

**Multimedia display:** Multimedia assets in website content, such as pictures, videos, and photos, are a significant challenge. You can never be certain that every site visitor's browser will construct a content area larger than 500 pixels, for instance, if you embed a movie with a width of 500 pixels and put it within the 50% width container. The 500 pixel wide embedded video may overlap other site design elements if the visitor selects a lower resolution, which is not what you wanted.

**Readability:** Unless you utilise CSS solutions to define a minimum or maximum width, visitors with particularly big monitors or image quality settings may cause a free flowing width website to cover the whole width of the screen, trying to make it sometimes impossible to read [6].

Speaking of CSS, it may be challenging to get a fluid width website to perform and seem as it should in all major browser systems without a lot of effort and undesirable browser-specific CSS hacks. It's not difficult to make the site seem right, but since it takes more time and effort, some web designers choose to continue using the perfectly fine fixed-width layout way of developing websites. Ultimately, you should stay with the website layout strategy that makes you feel the most comfortable. But by all means, try out several designs and ideas to discover the ones you like the most.

### Designing a responsive layout

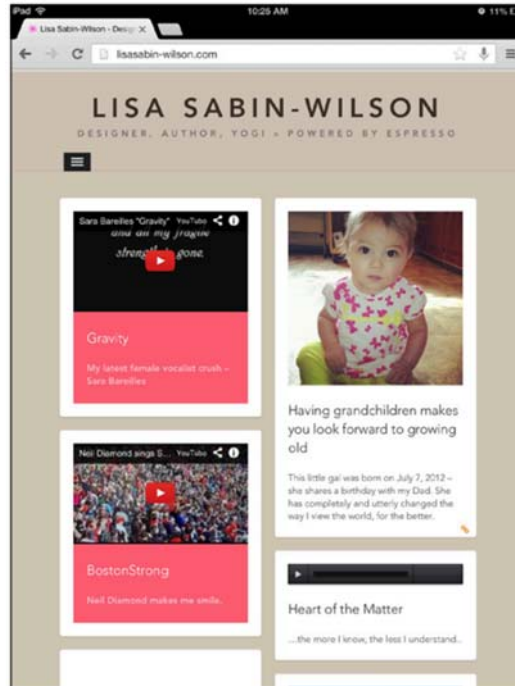
Every viewing device's size is taken into account by a website with a responsive layout. The website style is ready to handle the size on any device, whether it be the biggest television display or the tiniest smartphone or tablet. Since the layout adapts to its surroundings or, in the instance of a website, the size of something like the secondary display, it is termed responsive.

It seems that there are more and more platforms, browsers, and gadgets accessible for people to view websites every day. The majority of website owners want to make absolutely sure they are catering to both their typical visitors on desktop computers and those on mobile and tablets. A responsive layout helps you do this and is an essential element of your website's design, especially if the majority of people who visit it use mobile devices like smartphones or tablets.

Figure 2 shows how my personal website appears on a bigger desktop computer with a resolution of 1600 x 1200 and on a standard computer monitor with something like a resolution of 1024 x 768. Figure 3 and Figure 4 demonstrate how my personal website appears on an iPhone 5 and an iPad tablet, respectively, as an example of react native in action. A combination of grids and arrangements that are adaptable to any viewing situation is used to create responsive layouts. The layout, which includes the keyboard shortcuts, graphics, media, and content sections, dynamically changes to fit the size when website users switch viewing devices or even rotate their view from portrait to landscape [7].



**Figure 3: Illustrated the Responsive design on an iPhone 5.**



**Figure 4: Represented the Responsive design on an iPad tablet.**

There are several ways to create a responsive layout, but the most important thing is to use effective methods and tools and complete the task correctly. The resources on the following list are excellent places to start when designing responsively. Check out the following resources and give them some thought as possible beginning points and resources to include in your web designer toolkit:

1. **Smashing Magazine:** “Responsive Web Design: What Is It and How to Use It,” an article on responsive design that covers concepts and techniques.
2. **Bootstrap from Twitter:** A front-end framework for responsive web design that combines HTML, CSS, and JavaScript.
3. **Responsinator:** This useful online application enables you evaluate how your website appears on a variety of mobile devices, such as smartphones and tablets.
4. **Media Queries:** A good resource for inspiration is a website that shows responsive design methods being used today [8].

If learning about adaptable design standards intimidates you or whether it is something you'd prefer to put off for the time being, WordPress has a few plugins that will support mobile layout for almost any website, regardless of whether it currently has a mobile app that permits in place. The mobile/tablet view that while these plugins would have to provide you can occasionally not be as customized or visually pleasant as you would want. Starting to use responsive design solutions is the only way to completely control how company website looks on any smartphone. A handful of the WordPress plugins listed below will provide a mobile view for your website:

1. **JetPack:** A plugin with several different modules, including a Mobile module that will give your website viewers the opportunity to browse your website on any mobile device or tablet.

2. **WPTouch:** A popular plugin that transforms your WordPress website for mobile devices.
3. **WordPress Mobile Pack:** A toolkit that provides a mobile view for your website and includes different themes, widgets, and a mobile admin panel.

### Choosing the Number of Columns

The majority of websites are set up with rows that extend the length and columns that span the visitor's computer screen. You must choose how many columns you'll use to show material while creating a plan for your professional website layout. There are many possibilities, but bear in mind that the greater number of columns you use in an online marketing, the narrower they must be in order to fill the whole width of the screen. Instead of being limited by the quantity of vertical space in your browser window, rows may be utilized indefinitely since they are vertical.

Whereas a website using a four-column style has four smaller editorials that cover the breadth of the screen, a website using a one-column layout just has one column that fills the whole width of the desktop screen. The majority of layouts include one to three parts, with various sorts of content (blog entries, menus, banner ads, etc.) shown in each column. The most common arrangement is a two-column one, followed by a four different layout and sometimes a one-column one.

Take into account the following factors when deciding how many columns to use in a site design:

- a. The type of content being presented
- b. How much content there is
- c. Whether you, or your client, intend to advertise, sell products, or host videos or audio files

The response to those queries can help figure out the number of columns needed for the website to neatly integrate and convey all the lead to misinterpretation to website users. The website should seem tidy and well-organized, and you should take care to keep it free of superfluous clutter that can surprise users. Consider adding more columns to showcase the material in an organized fashion if you have a lot of stuff to offer [9].

### Determining Website Navigation

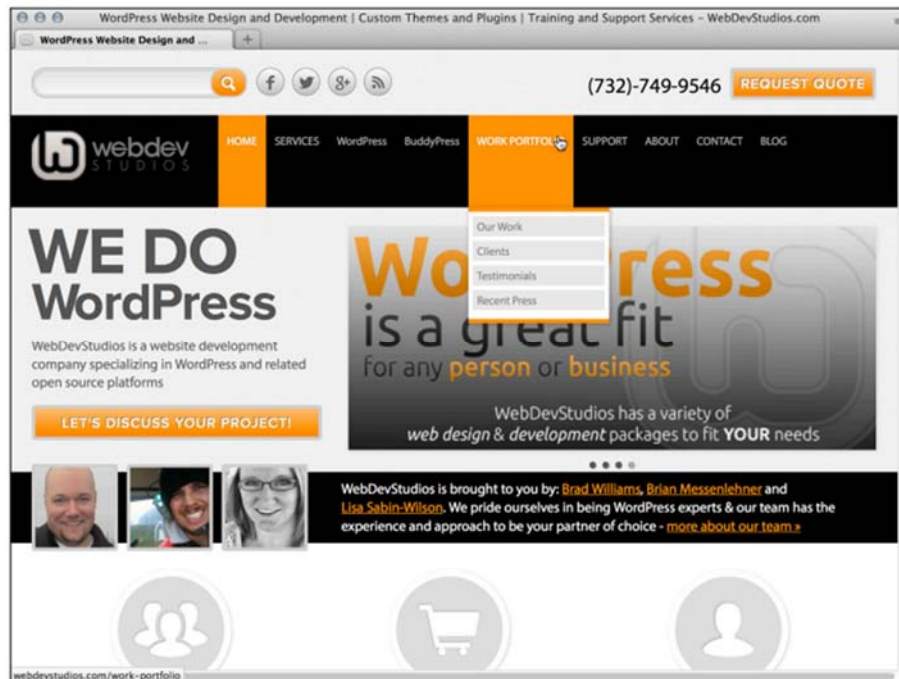
An excellent website offers users a simple opportunity to explore the various sections of the site. You must provide a menu of hyperlinks, or a navigation menu, so that your visitors may read posts and pages and archives and find a page where they can contact you. In order to make it easier for readers to access the information they need; navigator menus are shown prominently throughout websites. This article discusses how to create menus using WordPress' built-in Custom Menus function. As a web designer, it is your responsibility to choose the information and connections you would like to present in these menus as well as the navigational layout that will make the most sense for our client or site visitors. The many methods for completing your geographical framework are as follows:

- a. A horizontal navigation menu across the top of your site
- b. A vertical navigation menu down one side of your site

- c. A series of different menus with groupings of related links
- d. A horizontal navigation menu in the footer of your site

Given how simple the WordPress platform makes it for you, the options for offering keyboard shortcuts to your visitors are almost limitless. You must respond to the following inquiries as a designer creating a website:

- a. **Should you even have a navigation menu?** Some websites don't need a comprehensive navigation menu, especially if they're tiny websites with few materials or resources. Yet, the majority of websites have many pages, therefore you should provide a way for visitors to your site to quickly access those additional pages and return to the main page.
- b. **Where should you place the navigation menu?** Behind the website address and/or header image, at the top of the page, is a common place for the navigation menu to appear. To make it simple for users to navigate to the different sections of the site, my website at Web-Dev-Studios has a theme with a horizontal navigation bar with drop-down menus prominently displayed below the site header.



**Figure 5: Illustrated the example of a horizontal navigation menu with links that drop down, at WebDevStudios.com.**

- c. **What links should you include in the navigation menu?** What information and links should be shown in the navigation menu should be clear to you or your customer. Links to essential internal pages like an About Me or Contact page, categories, or archives are often included, as are connections to other websites like the site's Twitter or Facebook page [10], [11].

Knowing what the navigation bar should include will help you create a strategy for how to create and display the navigation bar on the website before you write a single program line for the website



development. For instance, a horizontal layout with drop-down lists links that appear when you hover over the navigation names is beneficial for websites with a lot of links in the menu. Similar to how websites with fewer links may benefit from a more condensed vertical menu in the sidebar.

## REFERENCES

- [1] K. Hancock, “Modular Online Learning Design: A Flexible Approach for Diverse Learning Needs (book review),” *J. Can. Heal. Libr. Assoc. / J. l’Association des bibliothèques la santé du Canada*, 2021, doi: 10.29173/jchla29535.
- [2] H. Leman, “A Review of ‘User Experience (UX) Design for Libraries,’” *J. Electron. Resour. Librariansh.*, 2012, doi: 10.1080/1941126x.2012.732860.
- [3] “User Experience (UX) Design for Libraries,” *Electron. Libr.*, 2013, doi: 10.1108/el-04-2013-0075.
- [4] J. R. Hargreaves et al., “Five questions to consider before conducting a stepped wedge trial,” *Trials*. 2015. doi: 10.1186/s13063-015-0841-8.
- [5] J. Kuehl, “Documentary Media: History, Theory, Practice,” *Hist. J. Film. Radio Telev.*, 2020, doi: 10.1080/01439685.2018.1543234.
- [6] “Marketing metrics: the definitive guide to measuring marketing performance,” *Choice Rev. Online*, 2010, doi: 10.5860/choice.48-0373.
- [7] M. Lynch et al., “Understanding women’s preconception health goals: Audience segmentation strategies for a preconception health campaign,” *Soc. Mar. Q.*, 2014, doi: 10.1177/1524500414534421.
- [8] V. Kubik, I. G. Frey, and R. Gaschler, “PLAT 20(3) 2021: Promoting Self-Regulated Learning: Training, Feedback, and Addressing Teachers’ Misconceptions,” *Psychology Learning and Teaching*. 2021. doi: 10.1177/14757257211036566.
- [9] D. Dallis, “Scholars and learners: a case study of new library spaces at Indiana University,” *New Libr. World*, 2016, doi: 10.1108/NLW-04-2015-0023.
- [10] “The rise and fall of strategic planning: reconceiving roles for planning, plans, planners,” *Choice Rev. Online*, 1994, doi: 10.5860/choice.32-0407.
- [11] M. Polfuss, N. Johnson, S. A. Bonis, S. L. Hovis, F. Apollon, and K. J. Sawin, “Autism Spectrum Disorder and the Child’s Weight-Related Behaviors: A Parents’ Perspective,” *J. Pediatr. Nurs.*, 2016, doi: 10.1016/j.pedn.2016.05.006.

## CHAPTER 10

### UNDERSTANDING CONTENT DISPLAY OPTIONS

---

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With a WordPress-powered website, several options are available to display content, such as:

**Full articles**

**Excerpts**

**Photo galleries**

**Chronological order**

**Grouped by topic**

**Most popular**

The kind of material your website provides will have a big impact on how you decide to present various forms of information there. Here are a few illustrations:

1. **An online store:** A website that sells items to users' needs to make sure that the product details, such as images, descriptions, prices, and purchase choices, are shown prominently. The goal of this form of e-commerce setup is to sell things and generate revenue, therefore it's critical that both the products and the website's goal be clearly visible when a visitor first arrives at the site. For a thorough discussion of WordPress's e-commerce features, see to Chapter 16 [1].
2. **A news or magazine site:** This kind of website focuses on distributing material, such as written articles and tales, to readers. This kind of website should provide the material in a way that makes it simple for people to access. To condense the material in easily navigable portions of the website, you may think about organizing it into thematic archives with extracts, brevities, or teasers that readers must click a Read More link to access.
3. **A photography site:** A website may be entirely devoted to photography or imaging, in which case its visual content would be highlighted.
4. **A site with a blog:** For instance, a straightforward, normal blog layout shows all blog articles in chronological order, starting with the most recent. This kind of content display is normally only allowed on websites that include blogs as part of their content offerings or have blogs on their home page. Using WordPress as a content management system (CMS) allows you to employ several layout styles for various website pages. An internal webpage any page other than your home page might have a totally distinct layout of blog posts and articles while the front page of the website can be entirely dedicated to e-commerce and items.

With a WordPress website, you have a lot of choices for content distribution. Knowing what kind of material will be provided and how it should appear is important importance to include in your overall strategy before you design or develop the site [2], [3].

### Testing Your Design in a Sandbox Environment

Having a sandbox to experiment in is incredibly beneficial for website designers and developers. In this application, a "sandbox" refers to a microsite or local development space where you may work on website design and test various layouts and content delivery strategies before going live on a client-hosted domain. A sandbox setting is important to my work as a professional programmer who produces several websites annually for my customers. The sand box gives me the privacy I need to develop the site and then display it to my client. We can then exchange ideas there to make sure the site's functionality and design meet my client's expectations. I can quickly move the website from my test domain to the customer's actual domain after the client has given me their final approval on the general design and layout.

Also, setting up a sandbox environment allows me to install and run beta versions of the program, which is very helpful when working with platforms that change as frequently as WordPress and associated plugins. Working with new features in a test environment before they are made available to the general public in an approved version update may be quite helpful. This has a number of benefits.

- a. Mastering new features so that, when you modernize your site, you can properly tell your users.
- b. The chance to install and test brand-new plugins or customizations before deciding to apply them to your website.
- c. Using WordPress Trac to submit any issues after testing early, beta releases of the platform to help find flaws. To participate to the WordPress project, you don't need to be a coder. You may work as a tester to assist programmers and developers in resolving problems for WordPress users everywhere.

In the following sections, you find out how to create your own sandbox environment as well as how to transfer a site from your sandbox domain to the live domain [4].

### Creating a Sandbox Environment

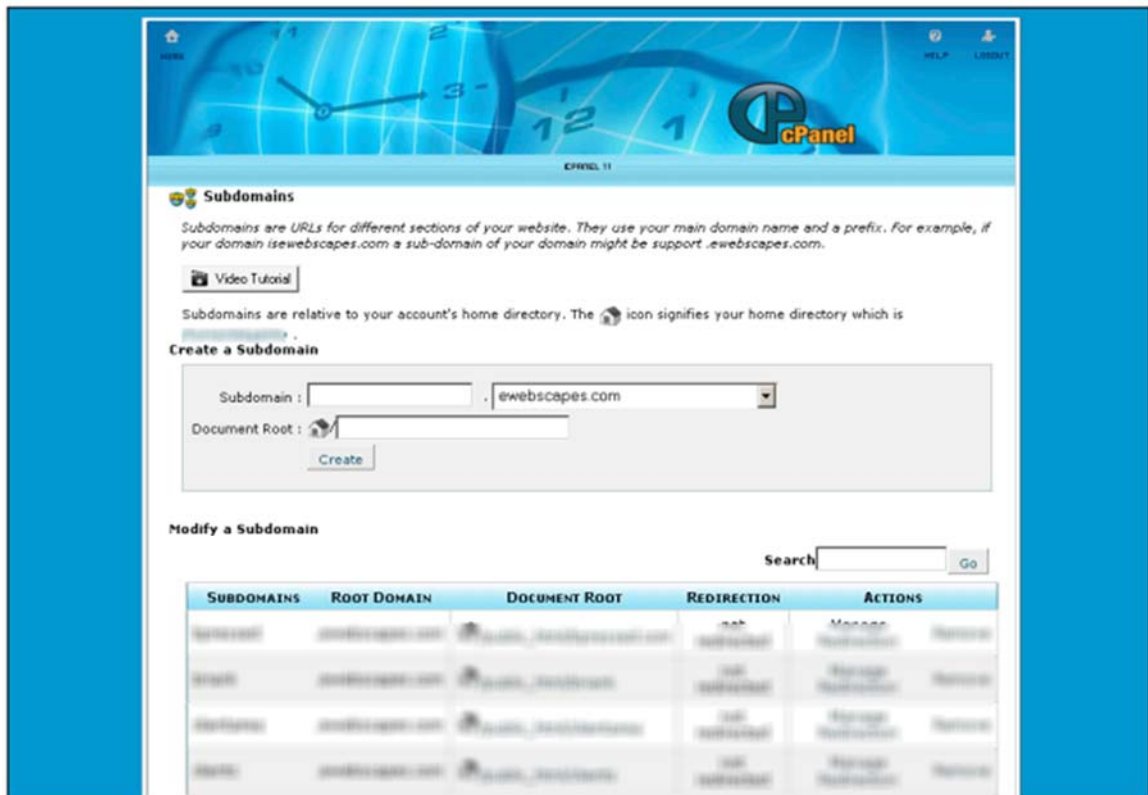
There are various methods to construct a test environment, and everyone will have a different preference. To establish a sandbox environment, follow these steps:

1. **Find out whether your hosting provider lets you create subdomains.** You typically have this choice with most hosting companies. I establish my subdomain using the cPanel hosting account manager, however your hosting account can provide you with a different administration tool, like Net-Admin or Plesk. Subdomains run below your main domain and may serve as a whole other area of your site, independent from your previous domain name. Subdomains are the second level of your testing environment and can handle unique material independently from content in your main domain.

I build the subdomain <http://testing.ewebscapes.com> in steps 3 and 4 using my domain, [ewebscapes.com](http://ewebscapes.com). The website's (or URL's) prefix testing refers to a subdomain that

branches off of ewescapes.com and, once configured, manages entirely separate material from what is now hosted on my main domain.

2. **Log in to cPanel (or the hosting account manager tool provided to you).** The processes may probably alter from what I've outlined in this section if you're using a management tool other than cPanel. For help with the tool you're using, please consult the documentation provided by your web hosting company [5].
3. **Locate and then click the Subdomains icon in the cPanel interface.** cPanel interface icon placement differs from hosting providers to hosting provider. As shown on Figure 1, the cPanel Subdomains page opens.

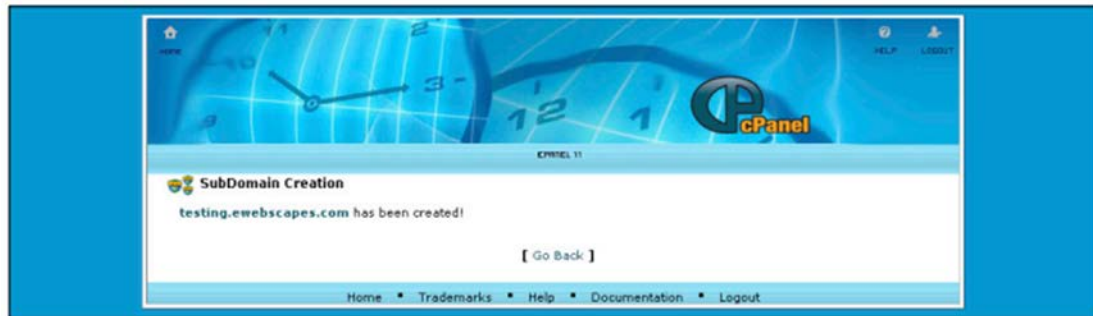


**Figure 1: Illustrated the Subdomains page in cPanel allows you to create a new subdomain.**

4. **Type the name of your subdomain in the Subdomain text box.** Type testing in the text field will make this quick and simple.
5. **From the drop-down list, choose the name of the domain on which you want to add the subdomain.** Figure 1 displays the domain ewescapes.com in the drop-down list. As you are creating a subdomain in this example on this domain, the new subdomain is http://testing.ewescapes.com.

Your new subdomain's unique folder name shows in the Document Root text field. This phrase instructs your web server where and when to install the essential WordPress files; do not change it.

6. **Click the Create button.** Figure 2 illustrates what happens next when the website refreshes and shows the notice that the new subdomain has been established.



**Figure 2: A successful subdomain-creation message in cPanel.**

You may install WordPress into the file that was created when you installed the subdomain following your decision to put one up on your hosting account. You would install WordPress under the /testing subdirectory, for instance, if you built a testing subdomain. For instructions on how to install WordPress, turn to Chapter 3 [6], [7].

With your new subdomain established, you may work on the design and development of your new WordPress website without interfering with anything on the existing site or the planned domain where the website will ultimately reside after it is finished). To take things a step further, you can lock off your sandbox environment and hide it from prying eyes and online services by using the Members Only WordPress plugin. By giving them a login and password to visit the sandbox test site, the Members Only plugin enables you to restrict access to the website to just those individuals you provide access to. On the Plugin Directory page at <http://wordpress.org/extend/plugins/members-only>, you can locate the Members Only plugin.

### Using a plugin to back up and transfer from your sandbox

I often transfer a WordPress website across hosting environments using the Backup Buddy plugin. There is no free version of Backup Buddy in the WordPress Plugin Directory. This plugin costs money, but it's well worth it since it streamlines the backup and relocation process from start to finish. Translation: Using Backup Buddy, backing up and moving your website takes only a few minutes [8]. The Backup Buddy plugin may be used to backup data and transport it from your test environment to the destination server for your client and vice versa. Use this plugin to transfer the website from current single environment to your server or the server of one of your clients by following these steps:

1. Purchase and download the Backup Buddy plugin from <http://ithemes.com/purchase/backup-buddy>. At this time, the cost for the plugin starts at \$80.
2. Install the plugin on your current WordPress website. By current, I mean your sandbox environment, not the destination server yet.
3. In WordPress Dashboard, choose Plugins ⇌ Backup Buddy ⇌ Activate under the Backup Buddy plugin name. WordPress activates the plugin.
4. Choose Backup Buddy ⇌ Backups. The Backups page appears.

5. **Click the Full Backup button.** This starts a complete backup of your database, files, and content and neatly compresses it into a Zip file that you may save wherever on your local computer.
6. Download the import buddy .php file by clicking the import buddy . php link on the Backups page and downloading it to your local computer. Preferably, place this file in the same directory as the backup file you downloaded in Step 5.
7. **Connect to the destination web server via FTP.** See Chapter 5 for the lowdown on connecting to your web server and transferring files with FTP.
8. **Upload the backup.zip file and the importbuddy.php file.** These files are uploaded in the root, or top-level, directory on your web server. On some web servers, this is the /public\_html folder, but on others, it may be the /httpdocs folder. If you aren't sure what your root directory is, your hosting provider can tell you.
9. Create a new database on your new hosting account.
10. **Navigate to the importbuddy.php file in your web browser.** This URL looks like <http://yourdomain.com/importbuddy.php> (where yourdomain.com is your actual domain name). The Backup Buddy page loads in your web browser.
11. **Follow the steps provided on the Backup Buddy page to import the backup file and install WordPress.** These actions include adding the necessary database data, such as the database name, username, password, and host. Depending on the size of your website, the full procedure may take more than 5-10 minutes.
12. **Type the URL of your website in your web browser address bar and press Enter.** When Backup Buddy has finished its work, the new website is fully loaded into the new server and is an exact replica of what you have inside your sandbox environment. This loads your webpage in your browser window [9], [10].

This solution saves a tonne of time by backing up and moving a whole WordPress website between one server to another in about 5 to 10 minutes. It would take a few hours to manually transfer and backup the site by making manual backups of individual parts including photos, content, themes, plugins, settings, and so forth. My WordPress toolbox is incomplete without the Backup Buddy plugin, which I use at least multiple times every week.

## REFERENCES

- [1] M. Khandelwal, A. Sharma, D. Deepika Varshney, and A. Arti Dagur, "To analyze Consumer Satisfaction level in Digital Content Marketing with Emphasis on Shopping Websites," *Int. J. Eng. Technol.*, 2018, doi: 10.14419/ijet.v7i3.12.16444.
- [2] G. Moriana, "Educación en igualdad de género para prevenir la violencia machistaEducación en igualdad de género para prevenir la violencia machista," *Cuest. género la Igual. y la Difer.*, 2017, doi: 10.18002/cg.v0i12.4810.
- [3] F. M. Arrabal-Campos, A. Cortés-Villena, and I. Fernández, "Building 'my First NMRviewer': A Project Incorporating Coding and Programming Tasks in the Undergraduate Chemistry Curricula," *J. Chem. Educ.*, 2017, doi: 10.1021/acs.jchemed.7b00304.

- [4] D. Flynn, G. A. Ford, L. Stobbart, H. Rodgers, M. J. Murtagh, and R. G. Thomson, “A review of decision support, risk communication and patient information tools for thrombolytic treatment in acute stroke: Lessons for tool developers,” *BMC Health Services Research*. 2013. doi: 10.1186/1472-6963-13-225.
- [5] M. Meyappan et al., “Development of a novel gout treatment patient decision aid by patient and physician: A qualitative research study,” *Heal. Expect.*, 2021, doi: 10.1111/hex.13184.
- [6] A. Gras, J. C. Cañadas, and M. Ginovart, “A free accessible individual-based simulator enabling virtual experiments on soil organic matter processes in classroom,” *J. Technol. Sci. Educ.*, 2013, doi: 10.3926/jotse.72.
- [7] T. Marques, M. Vairinhos, and P. Almeida, “VR 360° and its impact on the immersion of viewers of suspense AV content,” *Multimed. Tools Appl.*, 2021, doi: 10.1007/s11042-021-11067-9.
- [8] G. M. Mateo, “Educación en igualdad de género para prevenir la violencia machista,” *Cuest. género la Igual. y la Difer.*, 2017.
- [9] Y. H. Song, K. Pinkernell, and E. Alt, “Stem cell-induced cardiac regeneration: Fusion/mitochondrial exchange and/or transdifferentiation?,” *Cell Cycle*. 2011. doi: 10.4161/cc.10.14.16513.
- [10] T. Yucel, P. Cebe, and D. L. Kaplan, “Structural origins of silk piezoelectricity,” *Adv. Funct. Mater.*, 2011, doi: 10.1002/adfm.201002077.



## CHAPTER 11

### WORKING WITH WORDPRESS THEMES

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#### Finding and installing a WordPress Theme

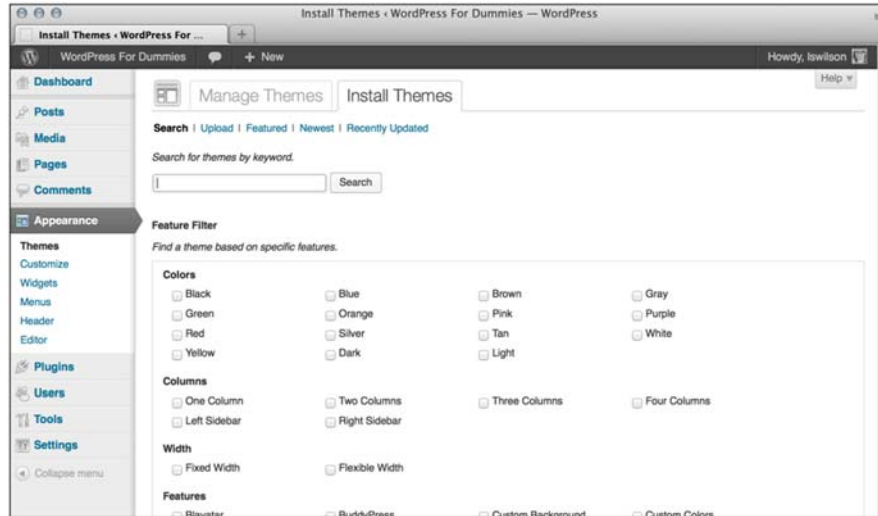
WordPress themes are just a collection of files, referred to as templates, that, when activated in WordPress, define the appearance and essential functionality of your site. Twenty Thirteen is a very helpful default theme included with WordPress named after the year it was released in version 3.5 of WordPress. The majority of WordPress-using bloggers don't spend much time looking for a theme they enjoy more than Twenty Thirteen. The default theme is not required, however it is a very useful option for a simple website [1]. The other WordPress themes covered in this chapter are available for download and may serve as the basis for your entire design project. You should be aware of the distinctions between free and premium WordPress themes since not all of them are made equal:

1. **Free:** These themes are, simply said, free. These are freely available for you to download and use on your website. You may include a link to the developer in your footer as a courtesy, but you can also choose to delete it.
2. **Premium:** Some themes have a price tag. Typically, you can only get premium themes after spending somewhere between \$10 and \$500. These themes, in the opinion of the designer, are superior to the competition and are hence worthy of the money you pay for them. The majority of premium themes include a comprehensive support package and access to any future updates as they become available.

#### Finding and Installing a Theme from the Themes Directory

Free WordPress designs are well-liked due to their attractive looks, simple setup and usage, and, for the most part, low cost. These are excellent resources to utilise when launching your new website, and if you have any experience with visual design and Cascading Style Sheets (CSS), you can even tailor one to your specific requirements. Without hiring a specialist, you can quickly get your site running smoothly with a fresh look by utilising free themes. You are free to switch themes whenever you want. Trying on many free themes is similar to trying on various clothing for your website; you may switch between them until you discover the perfect theme. It could take some time to select your theme that best suits you, but with hundreds of options, you'll ultimately find one [2]. Without ever stepping outside of the WordPress Dashboard, the WordPress platform provides a simple method to explore the Themes Directory page to locate, preview, and install themes for your website. The procedures are as follows:

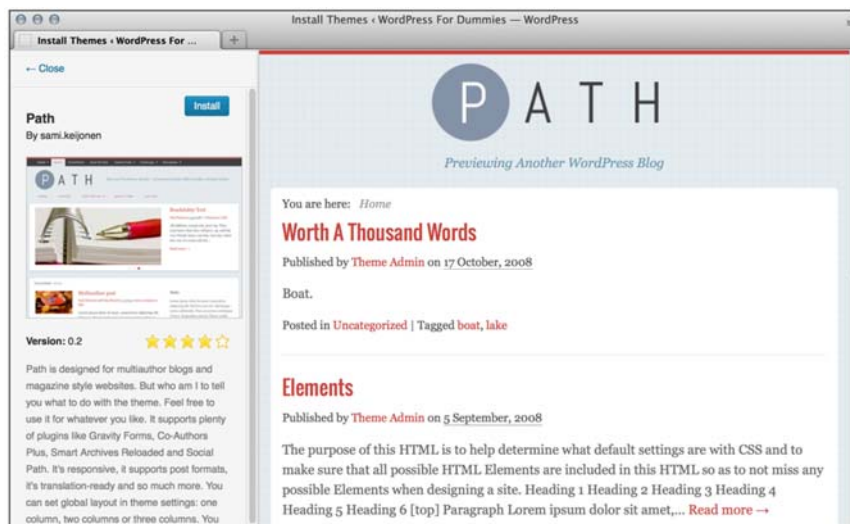
1. Choose Appearance ⇔ Themes on the WordPress Dashboard and then click the Install Themes tab at the top of the Manage Themes page. The Install Themes page opens, as shown in Figure 1.



**Figure 1: Displayed new themes on the Install Themes page on the Dashboard.**

2. Use the Search box to look for a new theme by inserting a keyword, author, or tag. With the Feature Filter check boxes, you may narrow down the results by themes, colors, columns, width, features, and topics.
3. Click the Search button towards the right of the Search box after you've entered your search parameters.
4. To see an example of the theme's appearance, click the Preview link beside the theme of your choosing. Click the Close option in the preview window's upper-left corner to go right back to the search results page.

Figure 2 shows a preview of the Path theme, which I found by searching for the keyword Responsive on the Install Themes page [3].



**Figure 2: Represented the A preview of the Path theme on the Install Themes page.**

5. To install a theme on your website after finding one you like, click this same Install link next to the theme's name.

6. To finish the installation, click the Install New button. The page for installing the theme displays after the window closes.
7. To activate and show the new template on your website, click Activate. The active theme is shown under the Current Parent header on the Manage Themes page when it has regenerated, indicating that it is the theme immediately being used on your website.

### **Deciding to Use a Premium Theme**

With the rise in popularity of premium WordPress themes, exceptional designers may now pursue their love for creating themes while earning a little salary. There are several perspectives on what distinguishes a premium theme. Indeed, the subject of what is and isn't regarded premium will undoubtedly ignite fervent discussion among theme users and designers. However almost everyone concurs that the following are signs of premium themes:

- a. A very high level of CSS development and stunning, expert visual design.
- b. A framework for the theme that includes features that make it simpler for you to modify and adapt the theme to meet your requirements. Changing the header graphic/logo, the color scheme, and the graphics and symbols are examples of this, but they are not the only ones [4].
- c. Detailed paperwork that offers the user in-depth guidance on how to properly utilize the theme. If the theme offers several functionalities and customization choices, this is extremely helpful.
- d. Complete backing from the theme's originator. For as long you continue to utilize a premium theme, you typically get full support for it when you purchase it.
- e. A use fees Premium layouts have a price. Premium themes cost with between \$10 and \$500.

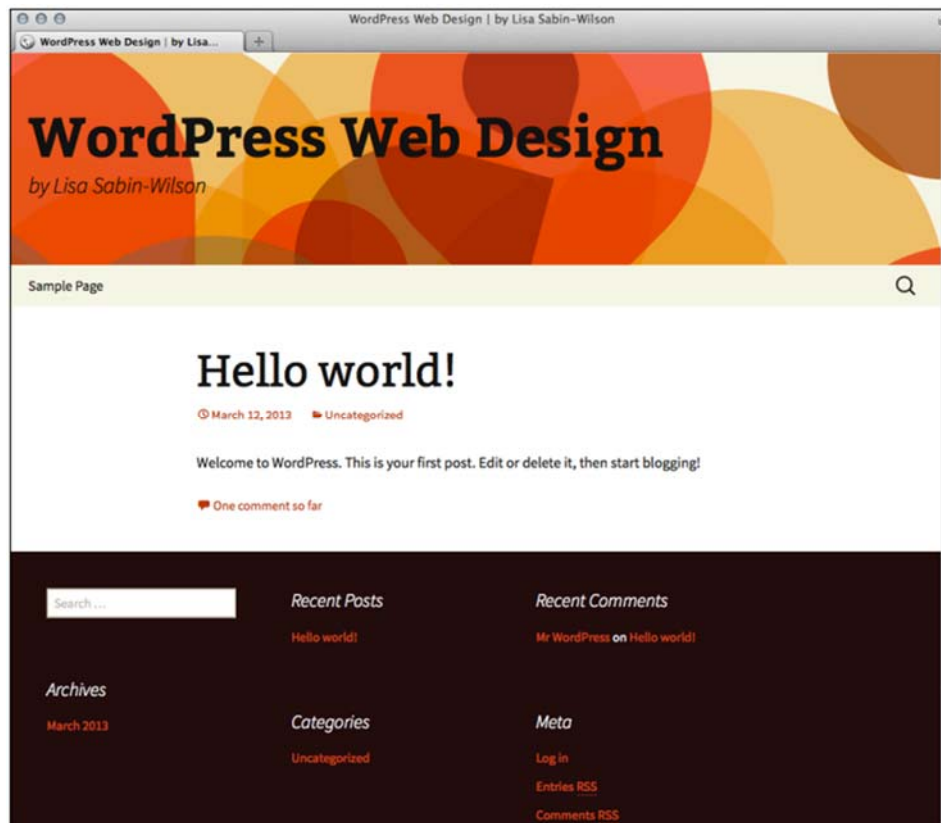
This is not to argue that none of the features I just described exist in free themes; it's just that, in general, they don't.

### **Working with the Default Theme**

The default Twenty Thirteen theme, which takes its title from the year it was first available to the public, arrives preinstalled with every WordPress installation. The core WordPress team developed Twenty Thirteen. It's a starting pitcher theme that helps new users get their webpages up and running and enables them to apply a tidy theme that makes use of numerous of the built-in display elements common to a basic WordPress setup. These display capabilities allow you to create custom navigation menus using the Custom Menus feature and utilize a number of header pictures, including your own unique header graphics. You learn about the features WordPress users are used to seeing in themes by work with the Twenty Thirteen theme. In order to incorporate those typical characteristics in your own themes, you may learn a lot by investigating them when you want to design your own WordPress themes. The details offered in this chapter may also be applied to other topics. I present the Twenty Thirteen theme's built-in features in this chapter, including the various templates, headers, menus, and widgets [5].

## Exploring the Layout and Structure

For the millions of WordPress users that want a straightforward yet contemporary appearance for their websites that puts the attention on the content, the Twenty Thirteen theme, as illustrated in Figure 3, provides a clean design style that is extremely configurable. Because of this, the typeface is clear and simple to read. You may modify the theme using many of the new built-in capabilities, such as uploading new feature photos and changing the background colors, in order to give it a basic but refined touch.

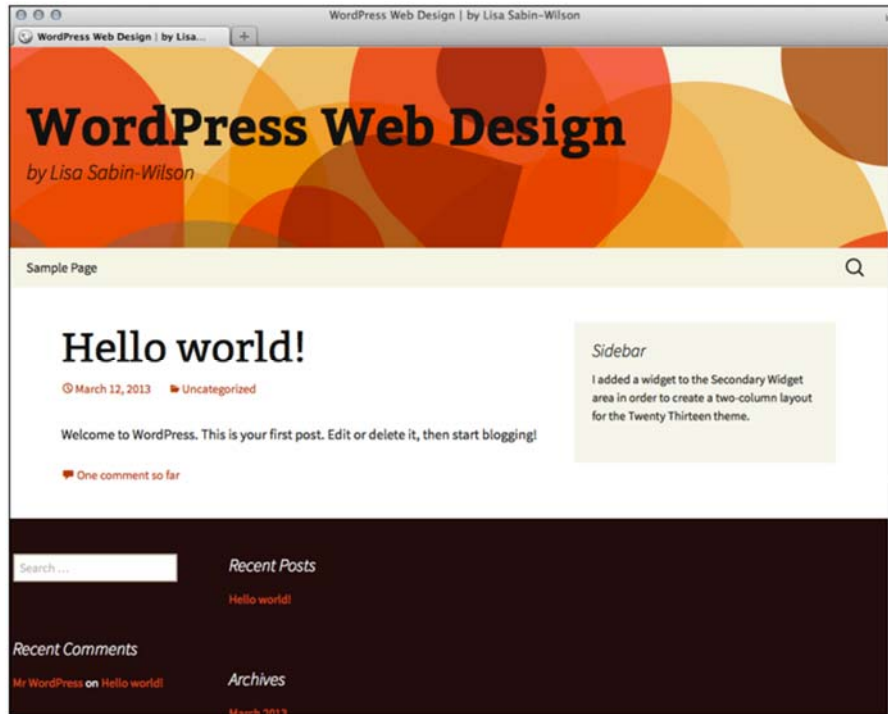


**Figure 3: Illustrated the Twenty Thirteen theme.**

You learn how to organize a web design project, including deciding on the number of columns you are interested in using for your design layout. The built-in widget regions of the Twenty Thirteen theme provide you two layout options:

**One-column default layout:** The Twenty Thirteen theme comes with a one-column layout as its default look, which comprises the banner area for the site name and bar navigation, a content area in the middle of the page, and a widget-ready footer at the bottom of the page [6].

**Two-column page layout:** The more typical form that you may already be accustomed to for websites and blogs is the two-column pattern seen in Figure 4. It adds a right right-hand column to which widgets may be added and offers all style choices for a one-column header, text, and footer.



**Figure 4: Illustrated the Two Column Layout.**

Just add one or two widgets to the Secondary Widget section of the Widgets page in your Dashboard to implement Twenty Thirteen's two-column layout on a new WordPress page. For more information on using widgets, read the "Enhancing your Website with Widgets" section. There are two widget spaces in the Twenty Thirteen theme: the Main Widget Area and Secondary Widget Area. The widgets you add to the Main Widget Area and Secondary Widget Area respectively show on the right sidebar and footer of your website, respectively.

### **Customizing the Header Image**

The top of most themes' websites includes a header picture. This picture is created either using a custom header feature in WordPress or by using a graphic specified in the Cascading Style Sheet (CSS) value for the property that represents the header section. The Twenty Thirteen theme has already done all the legwork for you, making it simple to add a particular focal picture to a website using that theme. You may choose one of three header pictures to show on your website with the Twenty Thirteen theme's custom header functionality, or you can upload a different image [7].

### **Selecting one of the available header images**

To use one of the available header images on your site, follow these steps:

- 1. On the WordPress Dashboard, choose Appearance ⇌ Header.** Your browser window displays the Custom Header page. One of the header photos is already picked by default and shown on your website, as can be seen in the Preview area.
- 2. Scroll to the Default Images section, which shows the available header images, and select the header image you like.** By default, the initial option is already chosen. In

order to have a new header picture show up with each page visit, you may also use the random option.

3. **Click the Save Changes button at the bottom of the page.** The Custom Header page refreshes and displays your chosen header image in the Preview section.

By returning to the Custom Header page and installing one of the other header photos to your site by following the steps above, you may quickly flip between the other header images.

### Uploading your own header image

The standard header graphics are suitable, but you may want somebody special for your website. You may choose a unique header picture, such as a snapshot you took or a graphic you created.

To post your own header picture to your website, follow these simple steps:

1. **On the WordPress Dashboard, choose Appearance ⇨ Header.** The Custom Header page loads in your browser window as display in Figure 5.

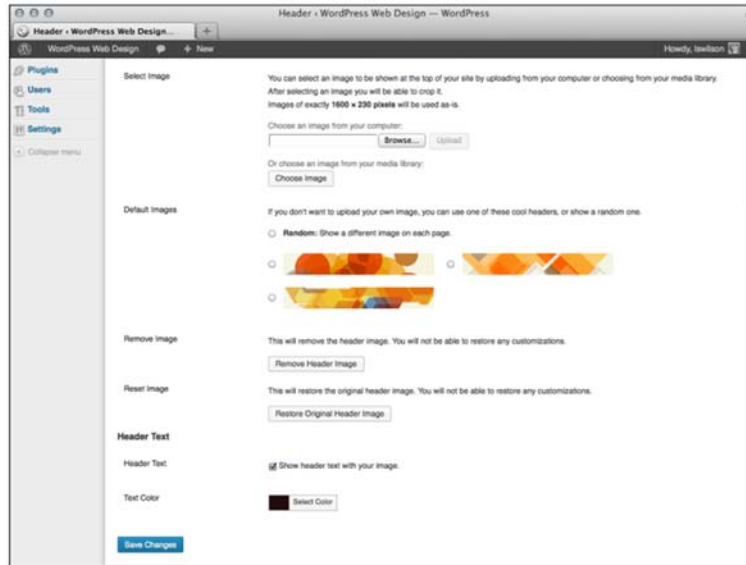


**Figure 5: Illustrated the Custom Header page shows the Twenty Thirteen theme's three default header images.**

2. **Scroll to the Select Image section, shown in Figure 6, and click the Browse button.** A dialog box pops up asking you to select an image from your computer's hard drive.
3. **Select the image you want to use from your local computer, click the Open button, and then click the Upload button.** The Crop Header Image page appears in your browser while the selected picture transfers to your web server.
4. **Use the image crop tool on the Crop Header Image page to resize your header image.** The header's standard dimensions for the Twenty Thirteen theme are 1600 by 230 pixels. In most cases, it's preferable to provide a brand-new header picture that has previously been precisely clipped in an image-editing tool. To accommodate a bigger picture in the



default area, utilize the built-in image advanced settings after uploading the header, as illustrated in Figure 7.



**Figure 6: Illustrated the Twenty Thirteen Select Image Section.**



**Figure 7: Illustrated the Cropping the header image in the Twenty Thirteen theme.**

Just drag one of the eight little handles that are situated at the corners and in the center of each side of your bigger picture to resize and crop it, as illustrated in Figure 7. Also, you may click anywhere on the picture to drag it vertically or horizontally for the desired positioning and cropping effect. [8].

5. **Click the Crop and Publish button.** The Custom Header page loads on the Dashboard and displays your new header image.
6. **Click the Save Changes button.** The changes you've made are saved to the header image, and it publishes to your site.



## Including Custom Navigation Menus

The links on your website are shown in a navigation menu. These links may direct you to other webpages or to pages, articles, or categories within your own website. You may create keyboard shortcuts on your website using the built-in menus functionality in WordPress, regardless of what they connect to. I advise you to include at least one navigation for site navigation so that visitors may view all your website has to offer. In line with the point-and-click nature of the web, giving visitors a link or complex mechanical to click is a good idea.

The menus feature offers a simple way to add and rearrange a variety of navigational interconnections to your site as well as create peripheral menu bars if your theme offers multiple menu areas, much like the drag-and-drop widgets feature that essentially allows you to modify areas of your site without knowing much code. You don't need to bother about adapting your theme since the menu's functionality is already included in the Twenty Thirteen WordPress theme by default. While you have to include support for it in the theme functions file, not all themes come with this functionality enabled by default. [9].

To create a new navigation menu in Twenty Thirteen, follow these steps:

1. Choose Appearance ⇌ Menus on your Dashboard.

The Menus page opens on your WordPress Dashboard.

2. Type a name in the Menu Name box and click the Create Menu button.

The Menus page reloads with a message that your new menu has been created. I named my menu Main, as shown in Figure 8.

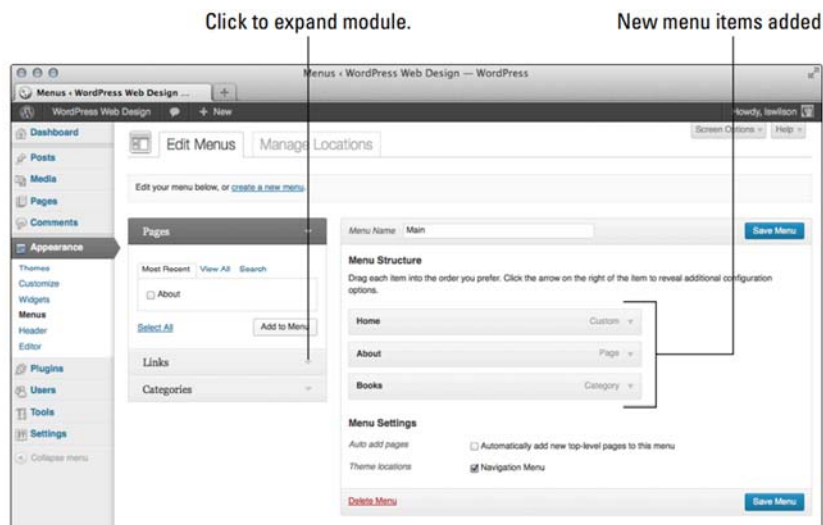


Figure 8: Illustrated the Menus page on the Dashboard.

3. Add new links to your newly created menu. WordPress allows you to add new links to the menu in three ways:

**Pages:** To get a list of all the webpages you have presently published on your site, click the See All option. Click the Add your Menu button after checking the boxes next to the page titles you wish to have added to your menu.

**Links:** Click the arrow to that same right of the Links module to broaden it, and then put the URL of the website you wish to add (for instance, type <http://www.google.com>) into the URL box. Next, enter Google as the nickname of the link you wish to see in your submenu in the Text area. then choose Add to Menu from the menu.

**Categories:** Click the right arrow to expand the Categories module, and then choose the See All link to get a list from every category you've ever established for your webpage. Click the Add to Menu button after confirming the boxes that correspond to the category names you wish to have added to the menu.

#### 4. Review your menu choices on the right side of the page.

The sidebar on the correct hand of the Menus window fills up with your menu options as you add new menu items. My menu is shown in the above graphic with one link, one category, and one category such that Home, About, and Books, respectively.

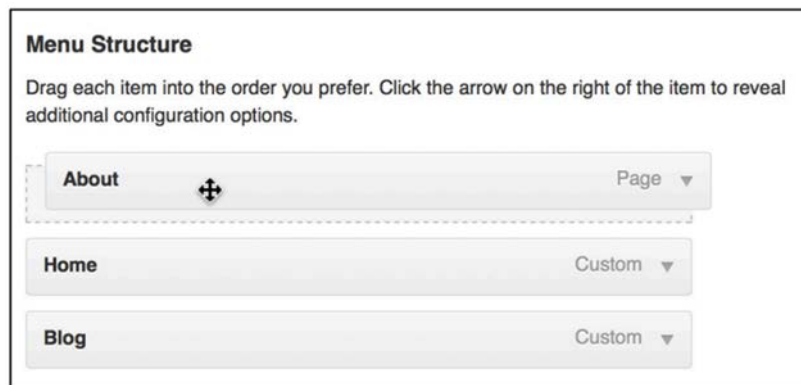
#### 5. (Optional) Edit your menu choices by clicking the down arrow to the right of the menu item name.

#### 6. When you're satisfied with your menu choices, click the Save Menu button on the top-right of the Menus page.

A message confirming that the new menu has been saved appears.

On your website, you may design as many buttons as necessary. The Twenty Thirteen theme places the primary navigation menu below the header image, but menu widgets are readily accessible that let you display other menus you've created in different aspects of your website, like the sidebar or footer. The primary navigation menu is determined in Appearance Menus Manage Locations Navigation Menu. You may alter your navigation menu after saving it in the manner shown below [10]:

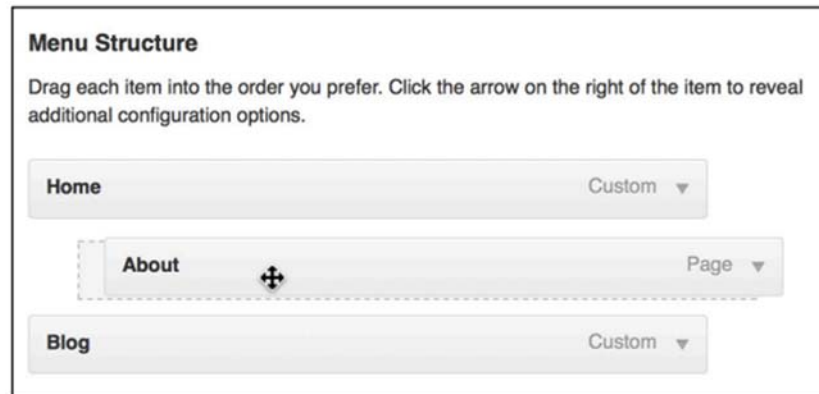
Rearrange menu items: To rearrange your menu items, utilize the drag-and-drop interface somewhat on Menus page by selecting a menu item, dragging it to the appropriate place, and then releasing the mouse button to confirm its position, as shown in Figure 9.



**Figure 9: Illustrated the Dragging the about menu link to the top of the menu.**

Subpages may be created under top-level menu items by moving a menu item just a little to the right underneath the top-level item, as seen in Figure 10. Subpages allow you to avoid clogging

the navigation bar and properly arrange material, making them particularly useful for websites with a lot of page content. To make sure that any changes you make to the menu are preserved and implemented to your website, click the Save Menu button.



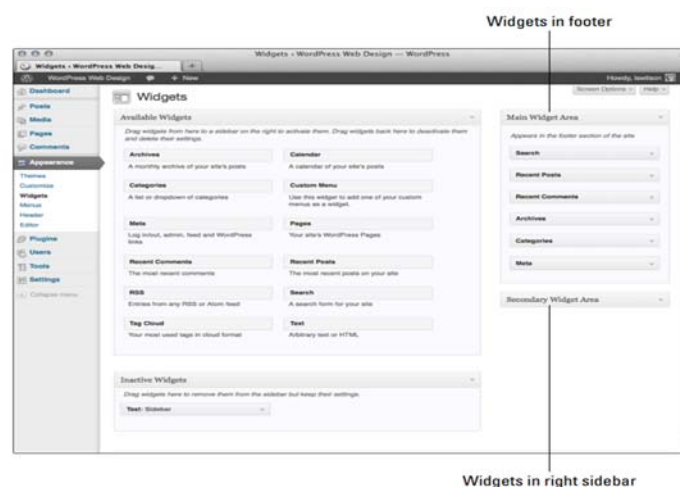
**Figure 10: Illustrated the dragging the about menu link under the home link to create a submenu item.**

### Enhancing Your Website with Widgets

The built-in WordPress widgets are really useful tools. Your blogroll, most recent articles, and monthly and subcategory archive listings may all be simply arranged so that they display on the sidebar of your website. Without learning PHP or HTML, you may organize and display the material in the sidebar using widgets. The Text widget and indeed the Recent Posts widget are two popular widgets that I cover in depth in the sections that follow, along with an introduction to widgets and instructions on how to add one to your website.

### Understanding how widgets work

You can insert or arrange content, such as a list of your most recent blog posts, links to your favorite websites, or customization options menus, by simply dragging and dropping available widgets from the Dashboard's Widgets page into those corresponding areas. Widget areas are the downloadable regions defined in your theme.



**Figure 11: Illustrated the Widgets page lists available widgets.**

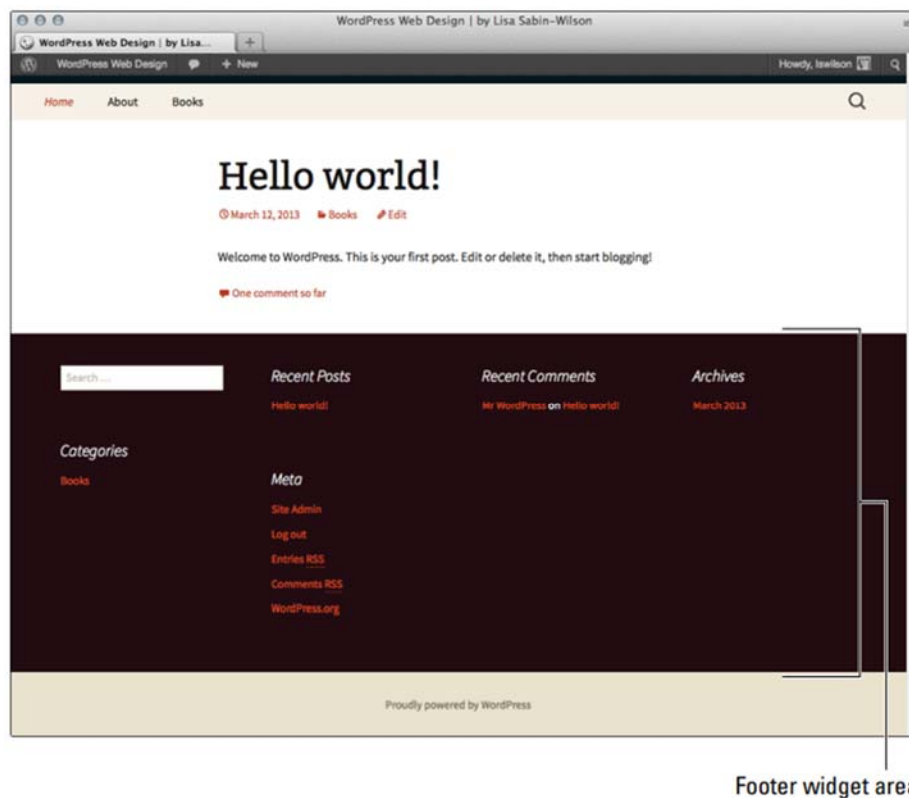
Several of the accessible widgets provided by WordPress and those sometimes introduced by WordPress plugins and themes make it simple to implement more sophisticated features using drag and drop, which is normally only possible if you typed executable code into your theme files [11].

Choose Appearance ⇌ Widgets from the Dashboard to examine the widgets that are accessible for usage on your website. As shown in Figure 11, the Widgets page appears and lists the various widgets on the left side of the page. Without learning a single line of code, you can manage whatever features you utilize and where you put them all on one page.

With the Twenty Thirteen theme, the footer and sidebar are by default widget zed, which means they extend to display whatever content you add to any of the two widget-ready regions. When you enable the Twenty Thirteen theme, your Dashboard's Widgets page displays two widget areas:

- a. Main Widget Area
- b. Secondary Widget Area

The first module area, Main Widget Area, shows widgets on one's website in the footer area when the Twenty Thirteen theme is active on your website, as illustrated in Figure 12. The right sidebar of your website's secondary widget area shows widgets. Depending on the design that you're presently using for your website, the quantity and style of widgets will change. To allow additional content places on your site, another theme may offer more widget areas than the two in the Twenty Thirteen theme.



**Figure 12: Illustrated the Twenty Thirteen theme's footer widget area.**

## Adding Widgets to your Sidebar or Footer

All of the widgets that are accessible for your WordPress site are listed on the Widgets page's left side. The widget locations that your theme has specified are listed on the right side of the page. Drag the widget you've chosen from the left side of the page into the widget area you've picked on the right. Drag the Search widget from the Accessible Widgets section to the Secondary Widget Area, for instance, to add a search box to that same right sidebar of the Twenty Thirteen theme's basic layout. Observe these procedures to add a new widget onto your sidebar or footer:

1. On the Dashboard, choose Appearance ⇨ Widgets.
2. From the Accessible Widgets column, choose the widget you wish to use. I decided to use the Recent Posts gadget for these tasks.
3. Drag and drop the widget into the Main Widget Area or Supplementary Widget Area on the right-hand side of the screen by clicking the widget's title. To the Secondary Widget Section, I moved the Recent Posts widget.
4. After configuring the widget's parameters as desired, click Save. You may customize several parameters for each widget. Some widgets allow you to adjust a variety of settings, while others only allow you to provide a title for the due to defects. The Recent Posts widget provides two choices, as shown in Figure 10-13: one to change the widget's description and one to choose number of times most recent posts to display. To see the alternatives available, open the widget by clicking the column to the right of the widget title.
5. Optional If you want to add additional widgets to your layout.
6. 6. Click a widget and drag it over or below another widget to arrange your widgets in the order that want them to show on your website. Once your widgets are placed how you like, repeat this process.

When you visit your website in a web browser after selecting and configuring all of your widgets, you'll see that the sidebar's content matches what you've organised in the Main Widget Area and Secondary Widget Area on the Dashboard page on your Dashboard. Amazing, isn't that? You may organise, add, or delete widgets anyway you choose by returning to the Widgets page. To remove a gadget from your toolbar or footer, click the Remove option after opening the drop-down list for the widget's title. The widget is moved back to the Available Widgets section by WordPress after being removed from the widget location on the right side of this page. Instead of selecting the Remove link, just drag the widget through into Inactive Widgets area on the left side, at the bottom of the page, if you want WordPress to save the settings you established for it after you remove it. The widget and all of its settings are saved in this way for later use.

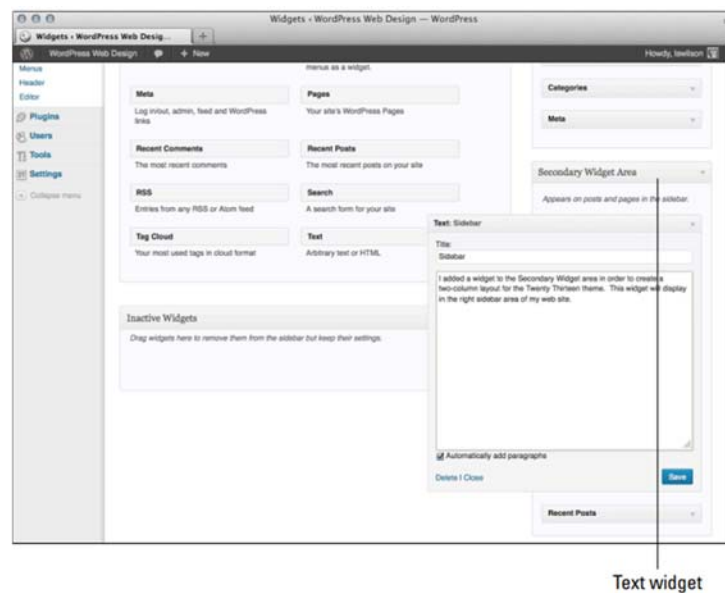
### Using the Text widget

One of the most helpful WordPress widgets is the Text widget, which lets you add text and HTML code to widget sections without having to change the theme's template files. Because of this, the Text widget is known as the "jack of all trades" widget since it allows you to put a variety of information on your website by using your own text as part of it. Here are some other instances of how I've utilised the Text widget and why it's such a well-liked feature to show this:

- a. **Add an e-mail newsletter subscription form:** You may include a form so that site visitors can subscribe to your email newsletter. The Text widget, which enables you to insert basic HTML markup inside it, is very useful since this often requires HTML.
- b. **Display business hours of operation:** The days and times your company is open may be prominently displayed for everyone to see.
- c. **Post your updates from social networks:** For immediate display of your posts from social networking sites like Twitter and Facebook on your website, many of them provide embed codes. These often include JavaScript, HTML, and CSS, and you can quickly incorporate the given code using the Text widget.
- d. **Announce special events and notices:** You may use the Text widget to swiftly publish these kinds of items to your site in just a few seconds if your company is having a special sale, announcing the hiring of a new employee, or issuing a crucial notification about adverse weather closings.

PHP code of any type, such as unique WordPress template tags or functions, is not supported in the WordPress Text widget. But you can add PHP code to the Advanced Text Widget, a fantastic plugin. Download the Advanced Text Widget from the WordPress Plugin if you need this capability:

1. From the WordPress Dashboard, choose Appearance ⇔ Widgets.
2. Drag and drop the Text widget to the selected widget area on the right from the Available Widgets section. To enable editing, the Text widget immediately launches.
3. Add a widget title in the Title field and any desired text in the text area, as shown in Figure 13.



**Figure 13: Illustrated the Text widget.**

4. Click the Save button and then click the Close link. The text widget closes, and you can view the content of the widget on your website.

**REFERENCES**

- [1] M. C. Norrie, L. Di Geronimo, A. Murolo, and M. Nebeling, “The forgotten many? A survey of modern web development practices,” *Lect. Notes Comput. Sci. (including Subser. Lect. Notes Artif. Intell. Lect. Notes Bioinformatics)*, 2014, doi: 10.1007/978-3-319-08245-5\_17.
- [2] S. K. Ghosh, *Build your Own Wicked WordPress Themes*. 2009.
- [3] H. Masaki, B. Steven, S. Kazuo, T. Naoya, K. Yoshihisa, and K. Kunio, “Development, Deployment and Evaluation of the Content Management System Generating CG Animations Automatically from Blog Entries,” *Int. J. Asia Digit. Art Des.*, 2021, doi: 10.20668/adada.25.3\_59.
- [4] K. M. L. Jones and P. Alida-Farrington, “Chapter 2: Full-On Customization with Themes and Plugins,” *Libr. Technol. Rep.*, 2011.
- [5] S. Fernandes and A. Vidyasagar, “Digital marketing and wordpress,” *Indian J. Sci. Technol.*, 2015, doi: 10.17485/ijst/2015/v8iS4/60375.
- [6] E. Halim, M. Hebrard, H. Hartono, K. O. Halim, and W. Russel, “Exploration WordPress as E-commerce RAD-CMS for SMEs in Indonesia,” in *Proceedings of 2020 International Conference on Information Management and Technology, ICIMTech 2020*, 2020. doi: 10.1109/ICIMTech50083.2020.9211122.
- [7] J. Bryant and M. Jones, “Page Template,” in *Pro HTML5 Performance*, 2012. doi: 10.1007/978-1-4302-4525-4\_6.
- [8] T. Aryanto, R. Rasimin, and A. Ghoni, “WEBSITE DEVELOPMENT IN SOCIAL KNOWLEDGE SCIENCE LEARNING WITH CMS WORDPRESS APPLICATIONS,” *Prim. J. Pendidik. Guru Sekol. Dasar*, 2020, doi: 10.33578/jpkip.v9i4.7966.
- [9] R. Tiwari, “WordPress: History in Brief and Analysis,” *SMART MOVES J. IJOSCIENCE*, 2015, doi: 10.24113/ijoscience.v1i3.65.
- [10] J. Ruohonen, “A demand-side viewpoint to software vulnerabilities in wordpress plugins,” in *ACM International Conference Proceeding Series*, 2019. doi: 10.1145/3319008.3319029.
- [11] S. Leary, *Beginning WordPress 3*. 2009. doi: 10.1007/978-1-4302-2896-7.



## CHAPTER 12

### DISSECTING THEMES AND TEMPLATES

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When you first begin designing websites using the WordPress platform, your jobs often include both website development and website design. WordPress design requires more than just displaying attractive images; it also entails understanding how to utilize WordPress themes and Cascading Style Sheets (CSS) to customize the website's functionality and appearance. You need to have at least a fundamental grasp of the programming languages in use before you dive in and start digging in to the code and functionalities required to create a WordPress theme for company website [1].

The Hypertext Preprocessor (PHP) language is used by most, if not all, of the functionality and template tags in WordPress. These tags enable your website to show post content, categories, libraries, links, and more when paired with the WordPress core code. You don't actually need to know PHP code to utilize WordPress, which makes it the most widely used content management system (CMS). That is to express, you can use WordPress without ever having to look at any of the template or code files it contains. But you must be familiar with the fundamentals of how PHP works if you wish to modify the WordPress theme's settings. You don't have to be a PHP coder, so don't worry.

You will learn the very essentials of PHP and MySQL in this chapter, which is where your WordPress data is stored in a relational database. You learn how the WordPress platform and PHP and MySQL interact to offer your website a live experience in users' browsers. Also, you are introduced to several fundamental WordPress theme ideas in this chapter, including The Loop, a crucial feature. You learn about template components and template tag specifications to be ready for this book's next chapters, which go in-depth on WordPress themes, template files, and functions.

#### **Understanding How PHP and MySQL Work Together**

WordPress runs on a PHP/MySQL platform that gives you all the tools you need to build your own website and dynamically publish your own content without understanding how to code those pages. In a nutshell, a MySQL database in your hosting account houses all of your stuff. PHP is a programming language for building dynamic web pages on the server. The PHP instructions are processed by the server when a visitor accesses a page created using PHP, and the results are then sent to the visitor's browser.

The most widely used language for adding, gaining access to, and processing data in a database is Structured Query Language (SQL), and MySQL is an open-source relational databases management system (RDBMS) that employs SQL. If any of that seems confusing to you, simply picture MySQL as a giant file cabinet that contains all the material for your website [2].

Visitors submit a request to a host server each time they visit your website to see your content. Your visitors will see the required information in their web browsers once the PHP programming language gets the request, calls the MySQL database, and retrieves the data from the database. Content in this context refers to the information that is kept in the MySQL database, including your blog posts, pages, comments, links, and settings that you have configured in the WordPress Dashboard. The theme (or design), whether it be the default theme, one you make, or one you have specially developed in this situation, is not a component of the content. Theme files are not kept in the database; instead, they are a component of the file system. So, it's a good idea to create and maintain a backup of any theme files you're presently utilizing.

### Exploring PHP Basics

PHP must be enabled on your web server for WordPress to function, so be sure to check with your web hosting company. If you already have WordPress installed and operational on your website (as explained in Chapter 3), you are aware that PHP is up and running without any issues. PHP 5.2.4 or later is now needed for the most recent version of WordPress. Before experimenting with template tags in your WordPress templates or plugin functions, it's important to grasp what a template tag is made up of and how it should operate in PHP. Examine the WordPress files included inside the download files as well. Many of the files have the .php file extension, which distinguishes them from other file types like JavaScript (.js) or CSS and is necessary for PHP files (.css).

This book won't make you an expert PHP programmer or MySQL database manager, but it will show you how PHP and MySQL interact to support WordPress in creating your website. Check out *PHP & MySQL for Dummies* by Janet Valade if you're interested in learning how to write in PHP or manage MySQL databases (Wiley). You may also check out Code Academy, a very great online tool that teaches you how to code for free and has interactive lessons and examples for languages like HTML, CSS, PHP, JavaScript, jQuery, and more. [3].

### Examining the makeup of a template tag

As I said before, WordPress is built on the PHP programming language, which is used to create web pages. PHP instructions are used to get data from the MySQL database. Every tag has a function to start PHP at the beginning and a function to stop it at the conclusion. The request to that same database telling WordPress to get the information and present it is sandwiched between those two statements.

A typical template tag, or function, looks like this:

```
<? php get info(); ?>
```

This example tells WordPress to do three things:

**<?php: Start PHP**

**get\_info();** : Use PHP to get information from the MySQL database and deliver it to your site.

**?>: stop php**

The tag function in this instance, `get info()`, is what pulls data out of the database and sends it to your website. Depending on the tag function that comes between the two PHP statements will determine what data is returned.

Every PHP command you run has to be stopped. Later on in the code, for each command. When PHP instructions are formatted incorrectly, your website will display incredibly unpleasant errors that have been known to drive programmers, developers, and hosting companies to shout aloud. The WordPress templates and functions include a lot of PHP beginning and stopping. The procedure seems to be time- and resource-consuming, if not thorough, but it isn't.

Always make sure the function is separated from the PHP start and stop statements with a single space. If there isn't a space following, the PHP function code won't run. You must have a space after if not, the PHP function code doesn't work. So make sure the code looks like this: `<?php get_info(); ?>` not like this: `<?phpget_info(); ?>`.

### Trying out a little PHP

To make sure you understand the basics of PHP, including how to start and stop PHP within a file, try your hand at a little sample of PHP code. Follow these steps to create a simple HTML web page with an embedded PHP function:

1. Open a new, blank file in your default text editor Notepad (Windows) or TextMate (Mac) then type `<html>` and press Enter.
2. Type `<head>` and then press Enter.
3. Type `<title> hello this is Mac </title>` and then press Enter.
4. The tag `</head>` closes it and tells the web browser that you're finished dealing with the title.
5. Type `</body>` to close the tag from Step 2 and then press Enter.
6. Type `<?php` to tell the browser to start a PHP function and then press Enter.
7. Type echo `'<p> this is test page </>` and then press enter.
8. Type `?>` (be sure to insert a space before) to tell the web browser to end the PHP function and then press Enter.

When you're done with Steps 1 through 10, double-check that the code in your text editor looks like this code, which is mention in Figure 1:

```
<html>
<head>
<title>This is a Simple PHP Page</title>
</head>
<body>
  <?php echo '<p>Testing my new PHP function</p>'; ?>
</body>
</html>
```

**Figure 1: Illustrated the text editor code.**

## Managing Your MySQL Database

The MySQL database intimidates a lot of novice WordPress users, probably because it appears to be well above their technical knowledge or proficiency. Indeed, typical WordPress users who just make use of it to publish articles seldom need to access the database provided they specifically want to. Only if you're working on developing a theme or plugin or contributing code toward the WordPress project do you need to examine the database. So that you can grasp the structure and know where things are kept, I offer you a basic overview of the Wordpress dashboard stored in MySQL in this part [4].

WordPress currently needs MySQL version 5.0 or later to operate effectively. Get your web hosting company to update your web server if it doesn't already have version 5.0 (or higher) installed. 11 tables that were created to hold various sorts of data form your WordPress site are automatically added to the database once WordPress is installed on your server. The tables' structure is shown in Figure 2 as follows:

Table	Action	Records <sup>1</sup>	Type	Collation	Size	Overhead
wp_commentmeta		0	InnoDB	utf8_general_ci	48.0 K B	-
wp_comments		1	InnoDB	utf8_general_ci	80.0 K B	-
wp_links		0	InnoDB	utf8_general_ci	32.0 K B	-
wp_options		161	InnoDB	utf8_general_ci	1.2 K B	-
wp_postmeta		58	InnoDB	utf8_general_ci	48.0 K B	-
wp_posts		14	InnoDB	utf8_general_ci	80.0 K B	-
wp_terms		2	InnoDB	utf8_general_ci	48.0 K B	-
wp_term_relationships		4	InnoDB	utf8_general_ci	32.0 K B	-
wp_term_taxonomy		2	InnoDB	utf8_general_ci	48.0 K B	-
wp_usermeta		17	InnoDB	utf8_general_ci	48.0 K B	-
wp_users		1	InnoDB	utf8_general_ci	48.0 K B	-
<b>11 table(s)</b>	<b>Sum</b>	<b>260</b>	<b>InnoDB</b>	<b>latin1_swedish_ci</b>	<b>1.7 K B</b>	<b>0 B</b>

Figure 2: Illustrated the WordPress database structure.

### wp\_comments:

This table stores the body of the comments published to your site, including

- A post ID that specifies which post the comment belongs to
- The comment contents
- The comment author's name, URL, IP address, and e-mail address
- The comment date (day, month, year, and time)
- The comment status (approved, unapproved, or spam)

**wp\_links:**

While using the WordPress Link Manager, you may build links that have the following information stored: name, URL, description, and, if applicable, any additional settings.

**wp\_options:**

This saves all of the theme and plugin selection settings as well as any other option settings you make for WordPress after installation.

**wp\_postmeta:**

This includes all posts or pages published to your site and contains metadata that includes:

- a. The special post ID number. To differentiate one blog post from the others, each one has an own ID number.
- b. Post meta key, meta id, and meta value Every post on your site has a unique identity, and any custom fields you've made are included in this meta data [5].

**wp\_posts:**

This table features the body of any post or page you've published, including AutoSaved revisions and post option settings, such as:

- a. The post author, date, and time
- b. The post title, content, and excerpt
- c. The post status (published, draft, or private)
- d. The post comment status (open or closed)
- e. The post type (page, post, or custom post type)
- f. The post comment count

**wp\_terms:**

This stores the categories you've created for posts and links as well as tags that have been created for your posts.

**wp\_term\_relationships:**

This stores the relationships among the posts as well as the categories and tags that have been assigned to them.

**wp\_term\_taxonomy:** WordPress has three types of taxonomies by default: category, link, and tag. This table stores the taxonomy associated for the terms stored in the wp\_terms table.

**wp\_usermeta:** This table features metadata from every user with an account on your WordPress website. This metadata includes

- a. A unique user ID
- b. A user meta key, meta value, and meta\_ID the meta information here includes unique identifiers for each user on your site.

**wp\_users:** The list of users with an account on your WordPress website is maintained within this table and includes information like:

- a. The username, first name, last name, and nickname
- b. The user login
- c. The user password
- d. The user e-mail
- e. The registration dates
- f. The user status and role (subscriber, contributor, author, editor, or administrator)

The majority of web hosting companies provide you a tool or interface to see your MySQL database, with the most popular one being phpMyAdmin, as illustrated in Figure 3. Get in contact with your hosting company to ask them how to examine your database if you're not sure how to do so on your hosting account [6], [7].

### Viewing the Template Files in a WordPress Theme

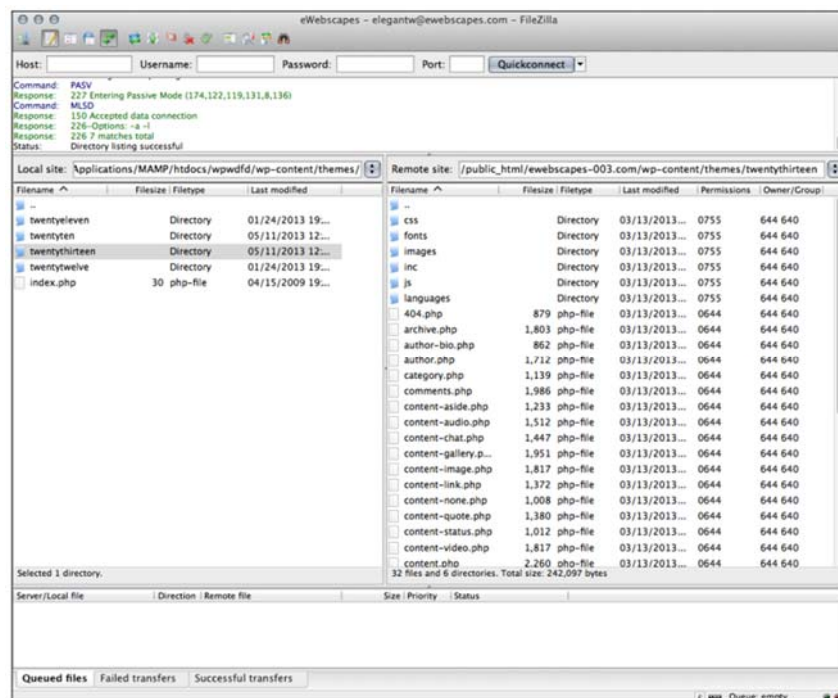


Figure 3: Illustrated the Themes in the /wp-content/themes folder.



WordPress templates made up of WordPress template tags make up a WordPress theme. I'm referring to the collection of templates that make up a WordPress theme when I use the term "theme." I only refer to one of the template files that includes WordPress template tags when I speak about a WordPress template. WordPress template tags enable any template to function as a part of a larger theme.

Here, I give you a quick rundown of the templates that compensate a WordPress theme and where you can find them, both on your server and even on your WordPress Dashboard. The remainder of this chapter contains crucial information regarding the processes to follow while developing a WordPress theme. Take these actions:

Connect to your web server via FTP and look at the existing WordPress themes on your server in the folder `/wp-content/ themes`. See the left side of Figure 3.

- a. Open the folder for the Twenty Thirteen theme (`/wp-content/ themes/twentythirteen`) and look at the template files inside, as shown in the right side of Figure 3.
- b. On your WordPress Dashboard, choose Appearance ⇌ Editor to look at the template files within a theme.
- c. To view and edit a template file, click the template name in the list on the right side of the page.

The template tags included in the word document are also visible on the Modify Themes page. The magic of your webpage is created by these tags, which link all of the templates with each other to create a theme.

Every file you change, with the exception of `style.css`, has a Documentation drop-down list underneath the search box on the Edit Themes page. The list of all the template tags utilized in the template you're now reading appears when you click the arrow somewhat on right side of the menu.

This list is useful whenever editing templates since it provides some understanding of the many template tags used only to develop features and functionalities for your WordPress theme [8].

The template files need to communicate with each other in order for the theme to run; they cannot operate alone. Use template tags to import the data from each template's Header, Sidebar, and Footer through into Main Index so that these files may function as a single unit. This process is what I mean when I say "calling one template into another."

### Examining the Templates That Make Up a WordPress Theme

While creating themes, you must enter the template's code, which might be intimidating at times, particularly if you have no idea what you're looking at. Understanding a WordPress theme's structure is an excellent place to start. The default theme that comes with every version of WordPress contains four key parts that make up a WordPress theme in its most basic form:

1. **Header:** This area usually contains the name of the site along with the site tagline or slogan. Sometimes, the header also contains a graphic or image.
2. **Body:** This area is where your content such as blog posts, pages, and so on appears in chronological order.



3. **Sidebar:** This area is where you find lists of navigation elements such as the blogroll, the archives, and a list of recent posts.
4. **Footer:** This area, at the bottom of the page, often contains links to further information about the site, such as who designed it, which company provides hosting for the site, and copyright information.

These four sections make up the very minimum of a simple WordPress site theme. Of course, you may expand these regions and add other sections that include more details, but for the sake of this chapter, I concentrate on the fundamentals. Twenty Thirteen is the default WordPress theme, and in my view, it's a really fantastic place to start, particularly if you're just getting started. I don't go into every template and tag that the Twenty Thirteen theme has; instead, I touch on the fundamentals to get you started learning about WordPress templates and template tags. You need these five template files in order to create a basic WordPress theme that covers the four essential website elements [9]:

header.php (Header)

index.php (Main Index)

sidebar.php (Sidebar)

footer.php (Footer)

style.css (Stylesheet)

Each WordPress theme includes a stylesheet (style.css), which determines how your site will be formatted and laid out in terms of how items are positioned on the page, the aesthetic of the font, the color of your hyperlinks, and other characteristics. As you may have guessed, CSS is used to style the material that is already there on your website rather than to add new content.

### The Stylesheet

A style.css file is present in every WordPress theme. This file often referred to as the stylesheet is used by browsers to provide style to website designs by way of font kinds, colors, and sizes, images, icons, background colors, borders, and other stylistic components. The stylesheet uses CSS IDs and classes to design certain website regions. Just designating a specific website element using CSS IDs and classes is all that is required. Classes may be used as many times as necessary, while IDs are used for components that only appear once on a page. While there are allusions to style in this document, the topic is covered in much greater detail. A comment block or the stylesheet header at the very top of the style.css file gives WordPress information about your theme. Code comments are remarks that are only included in the code for programmers, developers, and other readers. WordPress utilizes the CSS header to get information about your theme, while computers often completely disregard comment statements. In CSS, comments are always preceded by a forward slash (/) and a star (\*), and they are always followed by a star and a forward slash (\*). An example of the CSS header for the Twenty Thirteen theme may be seen in the code listing below:

### The Main Index and the Loop

There are just two files that your theme must include. The first is style.css, which was covered in the section before. The other is a Main Index file, or index.php as it is called in WordPress. When

someone visits your website, WordPress attempts to load the `index.php` file first. `index.php` is a very versatile file that may be used alone or with various templates. Your articles are pulled from the MySQL database and added to your website using the Main Index template. This design serves as the equivalent of the dance floor at a club for your website, where all the activity takes place. The Main Index template's initial template tag, which draws data from the Header template into the Main Index template as follows, calls in the Header template.

```
<?php get_header();>
```

Without using the Header template, your theme will still function, but it will be missing numerous key components, such as the CSS and the site name and slogan. Three other files are also referred to by the Twenty Thirteen theme's Main Index template:

**get\_template\_part( content, get\_post\_format() );** This function calls in the template `content.php` first, but if there are other content template files like `content-image.php` or `content-video.php`, the function will use one of the other template files, depending on what post format is being used [10].

**get\_sidebar();** This function calls in the template `sidebar.php` file.

**get\_footer();** This function calls in the template `footer.php` file.

In later portions of this chapter, I go through each of the above three components and template files. The Main Index template uses the four algorithms for the Header, Loop, Sidebar, and Footer templates defined later in this section to implement the idea of calling in a word document using a function or template tag.

The Main Index's ability to contain The Loop is often considered to be one of its key roles. WordPress employs a feature called The Loop to show pages and articles on your website. For each of their posts and pages that The Loop shows, whatever PHP or HTML that you add will repeat. The Loop has a beginning and a conclusion, and everything in between including any HTML, PHP, or CSS elements and codes is utilised to show each post or page.

Here's a look at what the WordPress Codex calls "The World's Simplest Index":

```
<?php
get_header();
if (have_posts()) :
    while (have_posts()) :
        the_post();
        the_content();
    endwhile;
endif;
get_sidebar();
get_footer();
?>
```

The php tag is opened first by the template. The template then includes the header, retrieving and displaying everything found in the `header.php` file. The good stuff now begins to happen. Using the `while (have_posts())`: bit, the loop is started.

For each post that occurs, everything between while because end while is repeated. The Settings area of the WordPress Dashboard controls how many posts are shown.

WordPress begins The Loop with the following line of code if your site contains posts (which most do, even when you initially install it):

```
if (have_posts()) :
    while (have_posts()) :
```

This code tells WordPress to grab the posts from the MySQL database and display them on your site. Then The Loop closes with this tag:

```
        endwhile;
    endif;
```

If your site satisfies that requirement, that is, if it has posts, WordPress continues with The Loop and shows your posts; if it does not, that is, if it lacks posts, WordPress shows nothing.

The `index.php` (Main Index) template runs the files for the sidebar and footer when The Loop concludes (at the end while). The Loop, albeit simple, is one of WordPress' essential features. The Loop will stop working if the while or end while statements are placed incorrectly. If you're experiencing difficulties using The Loop in an existing template, compare your copy to the original to determine whether the while statements are in the wrong location.

As a WordPress user, you can come across scripts or plugins that provide instructions like this: This must be inserted within The Loop. Pay close attention because I talk about The Loop in this section. You are more equipped to handle and comprehend your WordPress themes after knowing The Loop.

The Loop is a template element just like any other; it has to start PHP with a function and terminate with a function to stop PHP. PHP is used to start The Loop, which then asks: "While there are posts in my blog, show them on this page." By using this PHP function, WordPress is instructed to get the post data from the database and publish it back to the website. The Loop's conclusion functions as a traffic officer directing WordPress to cease using the function entirely [11].

### **The Header templates**

The Header template is the starting point for every WordPress theme because it tells web browsers the following information:

- a. The title of your site
- b. The location of the CSS
- c. The RSS feed URL
- d. The site URL
- e. The tagline (or description) of the site

A major picture and the navigation are often the first items in the header of a theme. These different aspects, which load on every homepage and seldom change, are often found in the `header.php` file.

The WordPress functionality that may be used to get the Header content is as follows: A few lines of code must be included at the opening of every web page. You may find the following lines of code at the start of each header.php file in a WordPress theme:

- a. The DOCTYPE (document type declaration) tells the browser which type of XHTML (Extensible Hypertext Markup Language) standards you're using. The Twenty Thirteen theme uses, which is a declaration for W3C (World Wide Web Consortium) standards compliance mode and covers all major browser systems (and is the markup doctype specifically for HTML5).
- b. The tag `<html>` tag (Hypertext Markup Language) tells the browser which language you're using to write your web pages.
- c. The tag `<head>` tag tells the browser that the information contained within the tag shouldn't be displayed on the site; rather, it's information about the document. In the Header template of the Twenty Thirteen theme, these bits of code look like the following example, and you need to leave them intact:

## REFERENCES

- [1] J. Brooks, S. McCluskey, E. Turley, and N. King, "The Utility of Template Analysis in Qualitative Psychology Research," *Qual. Res. Psychol.*, 2015, doi: 10.1080/14780887.2014.955224.
- [2] K. Littlewood, N. Beausoleil, K. Stafford, and C. Stephens, "'What would you do?': How cat owners make end-of-life decisions and implications for veterinary-client interactions," *Animals*, 2021, doi: 10.3390/ani11041114.
- [3] N. A. Hudson *et al.*, "Community football teams for people with intellectual disabilities in secure settings: 'They take you off the ward, it was like a nice day, and then you get like medals at the end,'" *J. Appl. Res. Intellect. Disabil.*, 2018, doi: 10.1111/jar.12359.
- [4] B. McEllistrem, A. Barrett, and K. Hanley, "Performance in practice; exploring trainer and trainee experiences of user-designed formative assessment tools," *Educ. Prim. Care*, 2021, doi: 10.1080/14739879.2020.1815085.
- [5] C. C. Young, A. J. Simonton, S. Key, A. N. Barczyk, and K. A. Lawson, "Closing in on Crisis: Informing Clinical Practice Regarding Nonsuicidal Self-Injury in Youth," *J. Pediatr. Heal. Care*, 2017, doi: 10.1016/j.pedhc.2016.10.005.
- [6] M. Casilla-Lennon *et al.*, "Pregnancy in physicians: A scoping review," *Am. J. Surg.*, 2022, doi: 10.1016/j.amjsurg.2021.07.011.
- [7] Z. Y. Dong and Y. Zhang, "Interdisciplinary Vision of the Digitalized Future Energy Systems," *IEEE Open Access J. Power Energy*, 2021, doi: 10.1109/OAJPE.2021.3108937.

- [8] M. A. Kelly, L. K. Freeman, and T. Dornan, “Family physicians’ experiences of physical examination,” *Ann. Fam. Med.*, 2019, doi: 10.1370/afm.2420.
- [9] D. Athanasiadou and K. M. M. Carneiro, “DNA nanostructures as templates for biomineralization,” *Nature Reviews Chemistry*. 2021. doi: 10.1038/s41570-020-00242-5.
- [10] V. Braun and V. Clarke, “One size fits all? What counts as quality practice in (reflexive) thematic analysis?,” *Qual. Res. Psychol.*, 2021, doi: 10.1080/14780887.2020.1769238.
- [11] A. Yılmaz, C. Gülgün, M. Çetinkaya, and K. Doğanay, “Initiatives and New Trends Towards Stem Education in Turkey,” *J. Educ. Train. Stud.*, 2018, doi: 10.11114/jets.v6i11a.3795.

## CHAPTER 13

### TEMPLATE FILES

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WordPress utilizes each theme file individually to create your website and make it function correctly. Some are used on every page, like the header and footer. Others, like the Comments template (`comments.php`), are only used sometimes to bring in certain functionalities. WordPress employs a series of queries to decide which templates to use when someone visits your site. Several more templates may be added to your theme. The following are some more template files that you may wish to utilize [1]:

- a. **Comments template (`comments.php`):** The Comments template (`comments.php`), which contains all the template tags necessary to show comments, is a must if you want to host comments on your blog. The comments were called into the template using the template tag.
- b. **Single Post template (`single.php`):** Your visitors are sent to the individual page for each post you write when they click the title or permalink. There, readers can read the full post and, if you've allowed comments, they can even submit their own remarks using the comment box.
- c. **Page template (`page.php`):** For static pages on your WordPress site, you may use a Page template (`page.php`).
- d. **Search Results template (`search.php`):** The `search.php` template for search results may be used to design a unique search results display. This template arranges the return of the results when someone uses the search tool to look for specified terms on your website.
- e. **404 template (`404.php`):** Create a custom 404 page using the 404 template (`404.php`), which is what users see when their browser cannot locate the requested page and displays the unattractive 404 Page Cannot Be Found message.

The aforementioned list of templates is not required. Nothing goes wrong if these templates aren't in your WordPress themes folder. These items are shown on the single post page, the search results page, and other pages using the Main Index template. The Comments template is the one exception. The template must be included in your theme if you wish to show comments on your website.

#### Exploring Template Tags, Values, and Parameters

I provide a thorough analysis and explanation of the WordPress template tags, explaining the idea of attributes and values, how to utilise them, and the many sorts of parameters. Before employing template tags in your Wordpress web files, you should have a firm understanding of these ideas [2].

It wouldn't be simple to use and alter your site if all of the material was hard-coded. You may dynamically add material and information to your website using template tags. The category is one example of a template tag that adds information. Use the `category()` element in your template to have all the categories shown as links without having to manually enter each post's appropriate categories and links.

When you utilise a template tag, WordPress is really instructed to do an action or get data. To get data from the MySQL database and display it on your website, template tags are often utilized. WordPress comes with more than 100 template tags, and each tag's capabilities differ substantially. A comprehensive collection of template tags may be found at [http://codex.wordpress.org/Template Tags](http://codex.wordpress.org/Template_Tags) in the WordPress Codex. Only PHP blocks may contain template tags. In a template file, PHP blocks may be toggled between open and closed as many times as necessary. After the block is opened, the server is aware that everything within has to be translated into PHP.

The first tag `()`. These tags must be included in every block. The same manner that PHP functions are utilised, so too are template tags. The tag is usually text without spaces, although it may also be opened and closed using opening and closing brackets, underscores, dashes, and a semicolon. The next line of code depicts how everything appears. A template tag may accept arguments since it is a PHP function. A parameter is just a variable that enables you to modify or filter a template tag's output. These are WordPress' three different categories of template tags [3]:

- a. Tags without parameters: Certain template tags don't need to be supplied any arguments since they don't need any choices. The `user_logged_in()` tag, for instance, does not take any arguments since it merely returns true or false.
- b. Tags with PHP function-style parameters: With one or more values inside the function's parentheses, you may send arguments to template tags that use PHP function-style parameters. For instance, you may restrict the output to just include the description if you're using the `bloginfo()` tag.

```
<?php bloginfo('description'); ?>
```

- c. The order in which you specify the parameters is crucial if there are numerous parameters. Double-check the order of your arguments since each function determines the required order for its variables. Always include the value in single quotes, and commas should be used to separate multiple parameters.
- d. Tags with arguments in the form of query strings: You may update the values of just the required parameters using template tags with query string-style parameters. For template tags with a lot of possibilities, this is helpful. The `wp_list_pages()` tag, for instance, contains 18 arguments. Instead of utilising the PHP function style parameters, this function enables you to get the necessary information and provide a value [4].

**Table 1: Illustrated the Three Variations of Template Parameters**

Sr. No.	Variation	Description	Example
1.	Tags without parameters	There are no other alternatives for these tags. Nothing is included in the brackets for tags without	<code>the_tag();</code>



		parameters.	
2.	Tags with PHP function-style parameters	Between the tag parenthesis of these tags is a list of values separated by commas.	<code>the_tag('1,2,3');</code>
3.	Tags with query-string parameters	These tags often have a wide range of accessible parameters. Using this tag style, you may modify each parameter's value without being obligated to do so for all of the tag's other accessible parameters.	<code>the_tag('parameter=true');</code> Also accepts multiple parameters: <code>the_tag('parameter=true&amp;parameter2=true');</code>

Every template tag and parameter the WordPress program is aware of is listed on the WordPress Codex website, which can be accessed at <http://codex.wordpress.org>. In addition, I go into further detail about the template tags and parameters you may use to construct the features and content. The most fundamental ones most often used in just about single WordPress theme available are the ones I share with you in this chapter.

### Customizing Your Blog Posts with Template Tags

The template tags you make use of to show the content of each blog post you publish are covered in this section. The title, author, category, and content of a blog post are all included in the body of the post. The typical template tags for posts are shown in Table 1 and are present in any WordPress theme design. The tags in Table 1 are only functional when used within The Loop which I cover earlier in this chapter and is found in the `loop.php` template file [5].

### Putting It All Together

Template files can't do a whole lot by themselves the real power comes when they're put together.

### Connecting the templates

The primary template files, such as `header.php`, `sidebar.php`, and `footer.php`, may be integrated into other templates using WordPress' built-in capabilities. You may obtain the content of one template file and show it alongside the content of another template file using the `include` function, a special PHP function that is integrated into WordPress. The templates and their intended use are listed in Table 2.

**Table 2: Illustrated the Template Files and Include Functions**

Template Name	Include Function
<code>header.php</code>	<code>&lt;?php get_header(); ?&gt;</code>
<code>sidebar.php</code>	<code>&lt;?php get_sidebar(); ?&gt;</code>
<code>footer.php</code>	<code>&lt;?php get_footer(); ?&gt;</code>

search.php	<?php get_dearch_form(); ?>
comments.php	<?php coments_templete(); ?>

You need a distinct piece of code if you wish to include a file that lacks an internal include function. For instance, if you want to add a special sidebar to a particular page template (different from the standard sidebar.php file inside your current theme), you may call the sidebar file sidebar-page.php. You may use the following code to incorporate it in another template:

```
<?php get_template_part('sidebar', 'page'); ?>
```

In this sentence, the sidebar-page.php file is located in the main theme folder by the PHP get template part function, which then displays its contents. WordPress displays the sidebar.php file by default if it cannot locate that file.

Using the details on templates and tags I offer in the earlier parts of this chapter; you construct the basic Main Index template in the following sections. I've streamlined the loop.php configuration files in the Twenty Thirteen theme since it seems to have many lines of code when you read it. Following these instructions will help you get a basic grasp of the WordPress Loop as well as the typical template tags and functionalities you may use to build your own. [6]–[8].

### Creating basic WordPress templates

Using some of the fundamental WordPress templates, you may design a new theme for WordPress. These are the first stages in putting things together:

- 1. Connect to your web server via FTP, click the /wp-content folder, and then click the /themes folder.**

This folder contains the themes currently installed in your WordPress site.

- 2. Create a new folder and name it mytheme.**

You may choose New Folder by right-clicking in the majority of FTP applications. (If you're unsure how to create a folder, see the help files in your FTP application.)

- 3. In your favored text editor, such as Notepad (Windows) or TextMate (Mac), create the Header template with the code in Listing 11-1 and then save with the filename header.php.**

Use a scripting language, such as Notepad or Text-Mate, for writing templates. Utilizing word processing software like Microsoft Word causes a myriad of issues in your code. Word processing software can't recognize concealed characters or quote marks that are formatted in a certain manner.

- 4. Create a theme functions file with the code in Listing 11-2 and then save with the filename functions.php.**

In order to add widgets to your sidebar using the various WordPress widgets on the Widgets page on the Dashboard, the theme functions file registers the widget area for your website.

## Creating the Main Index template and activating the theme

Follow the following steps to see a basic illustration of what the Main Index template looks like when the tags are combined, using the tags supplied previously in Table 2, as well as the details on The Loop and the calls to the Header, Sidebar, and Footer templates provided in earlier sections. Follow these instructions to build a Main Index template that will function with the other templates in your WordPress theme [9]:

1. **Open a new window in a text editor program, enter the code and save the file as `index.php`.**
2. **Activate the theme on the WordPress Dashboard and then view your site to see your handiwork in action.**

Here's a closer look at each of the lines in `index.php`

- a. The data in your WordPress theme's header template is pulled by this template element.
- b. This template element has an if clause that checks to see whether this blog has any entries. The post content information is pulled from your MySQL database and displayed on your website if the response is yes.
- c. The Loop is initiated by this template element.
- d. To learn more about this tag and how it can be used to add some interesting styles to your design using CSS, check here.
- e. This tag instructs your blog to show a post title that is clickable (or connected) to the post's URL.
- f. The time and date that the post being created are shown in this template tag. The format you choose on the Dashboard is used with these templates tags to establish the format of the date and time.
- g. The categories that you have allocated the post to are listed in a comma-separated list in this template tag.
- h. Put in, for instance, category 1 or category 2.
- i. This template element shows the post's actual content. The "Read More.." part of this tag instructs WordPress to show the words "Read More," which are clickable (hyperlinked) to the post's permalink, where the reader may read the remainder of the article in its entirety. This tag is appropriate when you're showing a post excerpt, as defined by the Dashboard's real post setup.
- j. A template tag Posted by: The following information is shown as the post's author: Lisa Sabin-Wilson posted the item. The template element lists the number of comments and a link to this post's comments.
- k. This HTML code ends the element that was opened in Line 4 and closes it.
- l. This template element instructs WordPress to stop showing blog articles at this location and stops The Loop. Based on the option on the WordPress Dashboard, WordPress

- knows precisely how often The Loop needs to run. The number of times The Loop will run in WordPress is just that.
- m. If there is one, this template element shows a clickable link to the previous page of posts.
  - n. If there is one, this template element shows a clickable link to the subsequent page of posts.
  - o. The if question posed in Line 2 is referenced by this template tag. This stage offers the else statement if the response to that query is no.
  - p. This is the message that comes following the else declaration from Line 14 and is followed by that of the template tag. This remark may be rephrased to express whatever you wish.
  - q. The if statements from Line 2 is finished with this template tag.
  - r. The Main Index templates receives the data from the Sidebar template through this template tag, which also calls the Sidebar template.
  - s. The Main Graph template receives the data from the Footer template through this template tag, which also launches the Footer template. Note: The and tags that were begun in the Header template are finished by the code throughout the footer.php template (header.php).

Since the Main Index template, you just created lacks the normal HTML syntax, your site's visual presentation is considerably different from the Twenty Thirteen theme. The Main Index template and The Loop are shown in this example using just their most fundamental components.

### Using additional style sheets

A theme often employs many stylesheets to maintain organization or browser compatibility. The method for incorporating additional stylesheets in the template remains the identical regardless of how many you use. Create a css subfolder in the parent theme folder to add a new stylesheet. After that, make a fresh copy of the mystyle.css file in the css folder. You must modify the header.php file in order to incorporate the file. The required code for the new CSS file is seen in the example below [10], [11].

```
<link rel="stylesheet" href="<?php bloginfo('stylesheet_directory');
?>/css/mystyle.css" type="text/css" media="screen" />
```

### REFERENCES

- [1] P. Georgakopoulou, "Template Files:," J. Audiov. Transl., 2019, doi: 10.47476/jat.v2i2.84.
- [2] I. Artegiani and D. Kapsaskis, "Template files: asset or anathema? A qualitative analysis of the subtitles of The Sopranos," Perspect. Stud. Transl., 2014, doi: 10.1080/0907676X.2013.833642.
- [3] F. Template, "Instructions for Taylor & Francis Author Template Microsoft Word 2010 for Windows," Word J. Int. Linguist. Assoc., 2010, doi: 10.1016/j.compind.2006.07.009.

- [4] P. Georgakopoulou, “Subtitling and globalisation,” *J. Spec. Transl.*, 2006.
- [5] E. C. Considine and R. M. Salek, “A tool to encourage minimum reporting guideline uptake for data analysis in metabolomics,” *Metabolites*, 2019, doi: 10.3390/metabo9030043.
- [6] J. K. Noel et al., “SMOG 2: A Versatile Software Package for Generating Structure-Based Models,” *PLoS Comput. Biol.*, 2016, doi: 10.1371/journal.pcbi.1004794.
- [7] C. Cerezo, T. Dogan, and C. Reinhart, “Towards standardized building properties template files for early design energy model generation,” in *2014 ASHRAE/IBPSA-USA Building Simulation Conference*, 2014.
- [8] Mathi Murugan T. and E. Baburaj, “Log File Template Detection as a Multi-Objective Optimization Problem,” *Int. J. Swarm Intell. Res.*, 2021, doi: 10.4018/ijsir.2022010107.
- [9] J. Schneider, I. Backfisch, and A. Lachner, “Facilitating open science practices for research syntheses: PreregRS guides preregistration,” *Res. Synth. Methods*, 2022, doi: 10.1002/jrsm.1540.
- [10] M. Submission, “Instructions for Authors Instructions for authors,” *JACC Hear. Fail.*, 1936, doi: 10.1016/s2213-1779(19)30354-3.
- [11] T. Menu, “Instructions for Using the Author Template,” *Program*, 2000.

## CHAPTER 14

### DISPLAYING CONTENT WITH WIDGETS AND TEMPLATE TAGS

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The specifics of how you may manage the appearance of material on your site are provided in this chapter. In order to show certain sorts of information, such as blog posts, navigation bars, page content, archive links, etc., while creating a WordPress theme, visitors use a combination of template tags. This chapter examines typical template tags that instruct WordPress to showcase certain content on your website.

You can add new short code areas to your theme, which essentially allows you to use the drag-and-drop widget functionality to include different types of content and/or navigation on your website, so that you can use the drag-and-drop widget feature to get the results you need. As WordPress becomes much more intuitive and user-friendly, I find that in several areas you don't really need to use template tags or code in order to achieve the results you need. This chapter demonstrates how to create additional widget areas if your theme doesn't have had them in all the necessary locations so that you are able to fully benefit from the widget interface's simplicity [1].

Moreover, WordPress makes it possible to create several themes that deal with certain content kinds including categories, archives, search terms, author pages, and more. This chapter addresses how to develop content-specific templates to direct the visual style and content delivery of your website.

Finally, you learn how to integrate a number of the fantastic core WordPress tools into your theme to expand your possibilities for customizing. These tools include well-known built-in features like custom navigation menus, post kinds, document - oriented, and post thumbnails or prominent pictures.

#### Exploring Common Template Tags

In this part, I go through the template tags for the things that are often added to a website's sidebar. The reason I say "usually placed" is because you may be creative and put these template tags in other places, like the Footer template. In order to make this introduction to sidebar template tags straightforward, I just cover the most typical use; the innovative and unusual applications are left for you to explore after you've mastered the fundamentals.

The majority of the sidebar design tags and functionalities I discuss in this chapter may be achieved with widgets, necessitating no coding at all. To make sure you understand template tags and the parameters that go with them, I will introduce them to you in this chapter. This section also covers the tag parameters that you may use to modify some of the tag's display characteristics. These three categories of criteria are essential to understand:

1. **String:** Text that may range in length from a different syllable to a big list of words on a single line. A string that either sets a parameter option or displays content is enclosed in single quotation marks.

2. **Integer:** A number, either positive or negative. Parentheses and either the inside or outside of single quote marks are used to surround integers. In any case, they are properly digested. [2].
3. **Boolean:** Either true or false is set for the parameter options. This field has two possible values: text or a number (0 = false and 1 = true). Quotes are not used around boolean parameters.

## Calendar

The calendar templates tag shows a calendar with every single day in the week that you've written a blog post highlighted. The original blog entry is hyperlinked to those days as well. The tag to use to show the calendar is as follows:

```
<?php get_calendar(); ?>
```

The sole argument for the `get_calendar ()`; tag is a Boolean. When this option is set to true, a single letter representing the day of the week (for instance, Friday = F) is shown. When this option is set to false, the day of the week is shown as a three-letter abbreviation (for instance, Friday = Fri.). Examples of template tags that may be used to display the schedule on your WordPress website are shown below:

```
<?php get_calendar(true); ?>
```

```
<?php get_calendar(false); ?>
```

## List pages

The `<?php wp_list_pages(); ?>` tag displays a list of the static pages, such as About Me or Contact, that you can create on your WordPress site. Displaying links to the static pages allows readers to click the links and read the content you've provided.

WordPress has a handy Custom Menus feature if you like the navigation tool, you may never need to use the `wp_list_pages ()`; template tag. Still, I discuss this tag here because you may want to use it if you want complete control over how the list of pages appears on your website.

This tag uses the string style parameters. The most common parameters used for the `wp_list_pages()`; template tag.

## Using Template Files

I offer you an overview of the fundamental template files that make up a typical WordPress theme in Chapter 11, including `index.php`, `header.php`, `footer.php`, `sidebar.php`, and `style.css`. I also introduce the idea of template files. Since the WordPress theme engine is adaptable, you have many options for employing templates and tags to get various sorts of material from your database and display it on your website. You learn how to use the common templates to construct a very basic theme. In the parts that follow, I go through ways to enhance WordPress' built-in features in order to provide you with the freedom to swiftly take care of certain requirements for your website.

## Creating named templates

The header, footer, and sidebar are the three distinct regions that WordPress recognizes in a theme. The default behavior of the `get_header`, `get_footer`, and `get_sidebar` methods is to load the



corresponding header.php, footer.php, and sidebar.php files. Each of these routines additionally accepts a name argument that enables loading of a different file version. For instance, when you use get\_header ('main'), WordPress loads header-main.php [3].

If you can just build a template file with whatever name you want and load it directly, why would you utilise the name parameter? Use the name argument with the get\_header, get\_footer, or get\_sidebar methods for the following purposes:

- a. You use a standardized naming scheme that people can quickly identify and comprehend.
- b. Specialized template files may be loaded fast and simply.
- c. You provide a fallback that, if the named template file doesn't exist, loads the unidentified one. For instance, if your template has the tag get\_header ('main'), but for some reason header-main.php does not exist, WordPress will fall back to header.php, preserving the integrity of your webpage display until you can properly load the header-main.php file.

In short, use the name parameter feature if you have multiple, specialized Header, Footer, or Sidebar template files.

### Creating and using template parts

Some of templates are rather recent. The Header, Footer, and Sidebar templates are quite similar to template parts; however, you aren't constrained to using just these three. In order to do certain tasks, such as showing articles from a given characteristic or displaying a slideshow of photographs you've uploaded to your website, you may branch out and build as many template elements as you want.

Code that was previously repeated in many of the template files may now be stored in a single directory and loaded using a common procedure thanks to the get\_header, get\_footer, and get\_sidebar methods. The idea of template parts is to provide a brand-new, standardized method to be employed in order to load code segments unique to a certain theme. By using the idea of template parts, bits of code that show a block of advertisements or add a specific area of header widgets may be put in separate files and quickly loaded as a template component. [4].

Template parts are loaded via the get\_template\_part function. The get\_template\_part function accepts two parameters:

- a. **Slug:** The slug parameter is required and describes the generic type of template part to be loaded, such as content.
- b. **Name:** The name parameter is optional and selects a specialized template part, such as post.

A call to get\_template\_part with just the slug parameter tries to load a template file with the slug.php filename. Thus, a call to get\_template\_part ('content') tries to load content.php. And a call to get\_template\_part ('header', 'widgets') tries to load header-widgets.php. See a pattern here? When I refer to a slug, I mean the name of the template file, minus the .php extension, because WordPress already assumes that it's a PHP file.

A call to get\_template\_part with both the slug and name parameters tries to load a template file with a slug-name.php filename. If a template file with a slug-name.php filename doesn't exist,

WordPress tries to load a template file with a slug.php filename. Thus, a call to `get_template_part` ('content', 'post') first tries to load `content-post.php` followed by `content.php` if `content-post.php` doesn't exist. A call to `get_template_part` ('header-widgets', 'post') first tries to load `header-widgets-post.php` followed by `header-widgets.php` if `header-widgets-post.php` doesn't exist.

A nice example of the pattern part functionality in action is the Twenty Thirteen theme, which makes use of a loop template component to enable The Loop to be pulled into separate template files. The Loop is the portion of code included in the majority of theme template files that displays material by repeatedly looping over the collection of content (such as posts, pages, archives, and so forth). For a theme to work effectively, The Loop must be included in the template file [5].

Twenty Thirteen's `index.php` template file shows a template part for The Loop in action in line 7 of the following code using the `get_template_part()`; template tag, which display in Figure 1:

```
<?php get_header(); ?>
<div id="primary" class="content-area">
<div id="content" class="site-content" role="main">
<?php if ( have_posts() ) : ?>
<?php /* The loop */ ?>
<?php while ( have_posts() ) : the_post(); ?>
<?php get_template_part( 'content', get_post_format() ); ?>
<?php endwhile; ?>
<?php twentythirteen_paging_nav(); ?>
<?php else : ?>
<?php get_template_part( 'content', 'none' ); ?>
<?php endif; ?>
</div><!-- #content -->
</div><!-- #primary -->
<?php get_sidebar(); ?>
<?php get_footer(); ?>
```

**Figure 1: Represented the index.php file.**

Setting Up the Loop Twenty Thirteen significantly simplifies the `index.php` code compared to other themes by using a template component. The regarded as the primary code cleaning is only the cherry on top. The enhancements to theme development are what really matter.

The `get_post_format()`; tag and a template component containing a slug of content are required by Twenty Thirteen's `index.php` template file. The post formats used by the theme are referred to the `get_post_format()`; function. Post formats, which relate to various post kinds including audio, video, and picture, are addressed more thoroughly in the "Adding support for post formats" section. You may find files with the content slug: if you search through the other configuration files in Twenty Thirteen.

`content-aside.php`

`content-audio.php`

`content-chat.php`

`content-gallery.php`

content-image.php  
content-link.php  
content-none.php  
content-quote.php  
content-status.php  
content-video.php  
content.php

The `get_post_format()`; tag within the `get_template_part()`; automatically picks up the type of post format defined for the post and uses the corresponding template file. For example, if the post format is image, the `content-image.php` is used. Alternatively, if no post format is defined, WordPress simply uses `content.php`.

Before template parts, each of the template files would repeatedly copy the whole Loop function, which may be up to 10 lines of code (or more). This implies that altering the Loop code in the `index.php` file would also necessitate altering the `single.php` file. Imagine having to continually modify five template files with the same change; you would rapidly become weary of it and your risk of error would rise with each alteration. By employing a template part, you may reduce the amount of time it takes to build The Loop by only having to make one change, which is then applied to all templates that use The Loop code using the `get_template_part()`; method.

Without repeatedly copying the numerous lines of The Loop code, it is simple to create as many customized templates as necessary using the `get_template_part` method. The Loop's code can be simply changed in one location without having to copy it everywhere. Place the code in a separate file and use the `get_template_part` method to load it when necessary when you duplicate code portions in many template files [6].

### **Exploring content-specific standard templates**

The template files covered up to this point in the book cover a broad range of site views that are particular to the view rather than the content. For instance, the `page.php` templates file applies to all page views but not to a particular page, and the `category.php` template document applies to all category archive visits but not to a particular category. Nevertheless, in addition to the view, you can also build template files for certain content. Author, category, page, and tag are the possible four content-specific template kinds. Each one enables you to refer to specific material by the term's ID (for example, the ID of a certain author) or by the slug.

The slug argument of the `get_template_part` method mentioned in the prior section is different from the slug I explain in this section. In this section, "slug" refers to a post, page, category, or other item; for instance, "press releases" for a category or "hello world" for a post.

Assume you have an about-us slug and 138 id for you about us page. Either a `php` or a `page-about-us.php` file may be created as a template for this particular page. Similar to this, you may create an `author-7.php` or an `author-lisa.php` file if you want to make a template that is exclusive to an excellent author called Lisa who has a 7 id and a lisa slug. For websites that you don't maintain,

creating a template utilising the slug might be quite beneficial. A category-featured.php template may be made if you wish to share a theme you produced. Any category view with a featured slug would automatically use this template. The following are the file naming conventions, using categories as an example:

- a. The default (catch-all) template for the presentation of all categories has the filename category.php. If a category.php file is missing, categories will instead be shown using a template with the filename archives.php.
- b. To provide a template for a certain category, include a dash and the category ID number to the end of the filename. As indicated in Table 1, you may also finish the filename with a dash and the category slug to designate it as a template for that specific category. For instance, if you have a category called Books, its slug is books, and its specific template file is called category-books.php [7].
- c. If none of the following files exist: category.php, archives.php, or category-#.php, the category display will take its information from the Main Index template (index.php).

Table 1, gives you some examples of file-naming conventions for category templates, specifically.

Sr. No.	If the Category ID or Slug Is . . .	The Category Template Filename Is . . .
1.	1	category-1.php
2.	2	category-2.php
3.	3	category-3.php
4.	books	category-books.php
5.	movies	category- movies.php
6.	music	category- music.php

You may be wondering why the id option exists given how helpful it is to create templates using slugs and how an id only applies to one site. The id option predated the slug option, which is the simple answer; yet, it is still useful in certain circumstances. The customizations won't fail when the slug changes if you utilize the id attribute for a content-specific template. This is particularly useful if you put up the website for someone and aren't certain that he'll leave the slugs alone, such when a category's press-releases-for-news slug changes.

### Using Page templates

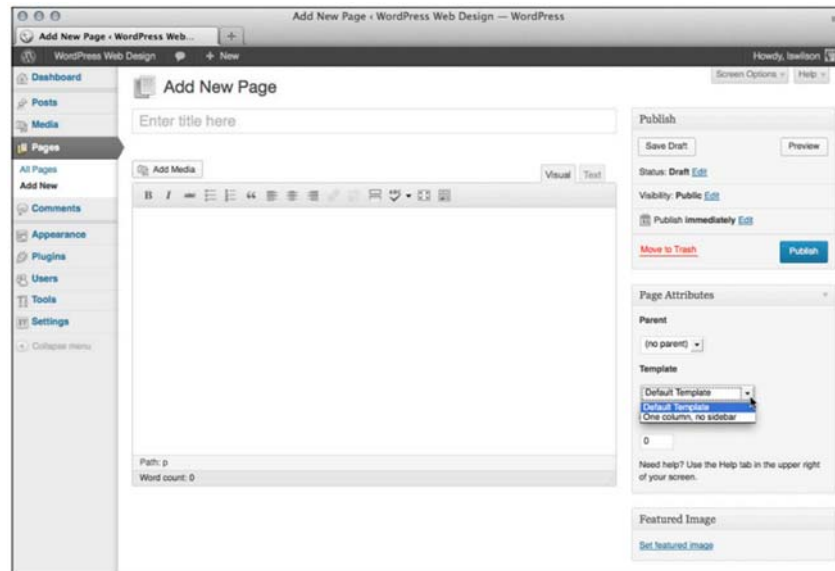
Even though the page-slug.php function is highly useful, sometimes it is unneeded or too complex to require the theme's user to implement the name you picked for a feature. Create a standalone template using individual templates so that customers may use it on any particular page they wish (much as page.php or single.php). A Page template may be used on several pages, unlike the page-slug.php functionality. Page templates are a lot more effective theme tool than page-slug.php templates because of the user selection and many usage capabilities combined.

Just include Template Name: Descriptive Name in the comment field at the start of the template file to turn it into a Page template. Figure 2 serves as an illustration of the start of a onecolumn-page.php page template.

```
<?php
/**
 * Template Name: One column, no sidebar
 *
 * A custom Page template without sidebar.
 *
 * The "Template Name:" bit above allows this to be selectable
 * from a dropdown menu on the edit page screen.
 *
 * @package WordPress
 * @subpackage Twenty_Thirteen
 * @since Twenty_Thirteen 1.0
 */
```

**Figure 2: Represented the Code Page Templates.**

This code adds One Column, No Sidebar to the Template drop-down list under Page Properties in the Add New Page or Edit Page screen and registers the template file with WordPress as a Page template, as seen in Figure 3. There are two steps involved in applying a template to a static page: Upload the template, then modify the page's code to instruct WordPress to assign it.



**Figure 3: Illustrated the Add New Page screen on the Dashboard showing page attributes for template assignment.**

In practice, you only need to write three lines of code to implement the One Column, No Sidebar Homepage template included in the Twenty Thirteen theme, as seen in the above code example. The code that starts my about page at <http://webdevstudios.com/about> static-page template is as follows [8]:

Between the first and last PHP function calls is where the Template Name is defined. This signals WordPress to identify this as a special pattern and add it to the selection of templates accessible in the Page Attributes section of the Create New Page, as shown in Figure 3. You may provide users of your theme convenient alternatives for structuring various pages inside their websites by offering a large collection of Page templates.

### Adding Theme Support for Built-In Features

You may quickly add a number of excellent features from the WordPress core to a theme to increase its customizability. WordPress offers you a number of built-in tools that you may use to improve your site and theme. Four of the most popular features are covered in this section:

- a. Custom navigation menus
- b. Custom post types
- c. Post formats
- d. Post thumbnails or featured images

While they are a part of the WordPress core, these functions aren't turned on by default. I truly do mean that you're turning on a built-in functionality in your theme when you add theme support. You may grin when you hear someone in the WordPress community remark, "That theme supports a specific feature," whether it's on a support forum or at a WordCamp event. You know precisely what they're referring to. With the theme you're using, you must turn on support for these features:

- a. **Core function:** Include the core function throughout the theme procedures (functions.php) file to provide support for the functionality in your theme.
- b. **Template function:** To show the features on your website, provide the relevant function tags in your theme template(s).
- c. **Templates:** You may be able to design templates for certain features to offer further enhancements to your site's appearance and functionality.

Each feature is covered in the sections that follow, in the following order: Create a feature-specific template in your theme to handle additional features after adding the core function to your theme, function tags to your templates, and, if specified, the core function [9].

### Adding support for custom navigation menus

The best tool WordPress provides theme developers, in my opinion, is the ability to create custom menus. Prior to the invention of this tool, the theme developer developed his or her own menu system, resulting in a large number of themes with little customizable navigation that didn't need coding and now a small number of themes with radically diverse approaches to navigation. Nevertheless, as I'll explain in the next sections, building extensive, tiered menus for your WordPress website just requires a few simple steps.

### Exploring the Custom Menus feature in Twenty Thirteen

Menus are already supported by the Twenty Thirteen theme. You can see that registering the theme's menu is handled by the following lines of code in the functions.php file for Twenty Thirteen:



// This theme uses wp\_nav\_menu() in one location.

```
register_nav_menu( 'primary', __( 'Navigation Menu',
'twentythirteen' ) );
```

The major theme location name and the Navigation Menu human-readable name are registered for a single navigation area using this code. Turn to Chapter 10 for instructions on how to construct menus through using Custom Menus functionality on your Dashboard when the Twenty Thirteen theme is active [10], [11].

### Adding the Custom Menus feature to a theme

You do not need to worry about modifying your theme to support the Custom Menus functionality since it is already included in the Twenty Thirteen theme by default. But if you're working with a different theme or making your own, follow these instructions to add this feature:

1. On the Dashboard, choose Appearance ⇔ Editor.
2. Click the Theme Functions (functions.php) template.
3. Type the following function on a new line anywhere above the closing `?>` in the Theme Functions template:

```
// ADD MENU SUPPORT
add_theme_support( 'nav-menus' );
```

This template tag tells WordPress that your theme can use the Custom Menus feature.

4. Click the Update File button to save the changes to the template.
5. On the Edit Themes page, open the Header template (header.php).
6. Add the following template tag by typing it on a new line anywhere in the Header template (header.php).
7. Click the Update File button to save the changes you've made to the Header template.

### REFERENCES

- [1] P. Bellini, D. Cenni, N. Mitolo, P. Nesi, G. Pantaleo, and M. Soderi, "High level control of chemical plant by industry 4.0 solutions," *J. Ind. Inf. Integr.*, 2022, doi: 10.1016/j.jii.2021.100276.
- [2] P. Wehner and R. Krüger, "Semantic-guided communication and composition in a widget/dashboard environment," in *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 2013. doi: 10.1007/978-3-319-04244-2\_3.
- [3] M. D. Merrill, "Learning-Oriented instructional development tools," *Perform. Improv.*, 1997, doi: 10.1002/pfi.4140360312.
- [4] O. Raitio *et al.*, "Notebook: Customizable web forms for recording observations," *Biodivers. Inf. Sci. Stand.*, 2019, doi: 10.3897/biss.3.39150.



- [5] C. Raibulet and D. Cammareri, “Automatic generation of mobile widgets,” *Int. J. Pervasive Comput. Commun.*, 2011, doi: 10.1108/17427371111146428.
- [6] *Beton Kalender 2017*. 2016. doi: 10.1002/9783433606803.
- [7] R. Abdulloh, *7 in 1 Pemrograman Web Untuk Pemula : Cara cepat dan efektif menjadi web programmer*. 2018.
- [8] T. Gao, M. Dontcheva, E. Adar, Z. Liu, and K. Karahalios, “Datatone: Managing ambiguity in natural language interfaces for data visualization,” in *UIST 2015 - Proceedings of the 28th Annual ACM Symposium on User Interface Software and Technology*, 2015. doi: 10.1145/2807442.2807478.
- [9] D. West and V. Schmidt, “Implementing UI design patterns as widget/templates for GUI builders,” in *Proceedings of the 2008 International Conference on Software Engineering Research and Practice, SERP 2008*, 2008.
- [10] J. Oh, W. H. Ahn, and T. Kim, “Web app restructuring based on shadow DOMs to improve maintainability,” in *Proceedings of the IEEE International Conference on Software Engineering and Service Sciences, ICSESS*, 2018. doi: 10.1109/ICSESS.2017.8342877.
- [11] T. De Sousa Lima, R. Gerson de, A. Azevedo, and C. De Salles Soares Neto, “Increasing reuse in learning objects authoring: A case study with the Cacuriá tool,” in *Proceedings of the 25th Brazilian Symposium on Multimedia and the Web, WebMedia 2019*, 2019. doi: 10.1145/3323503.3349555.

## CHAPTER 15

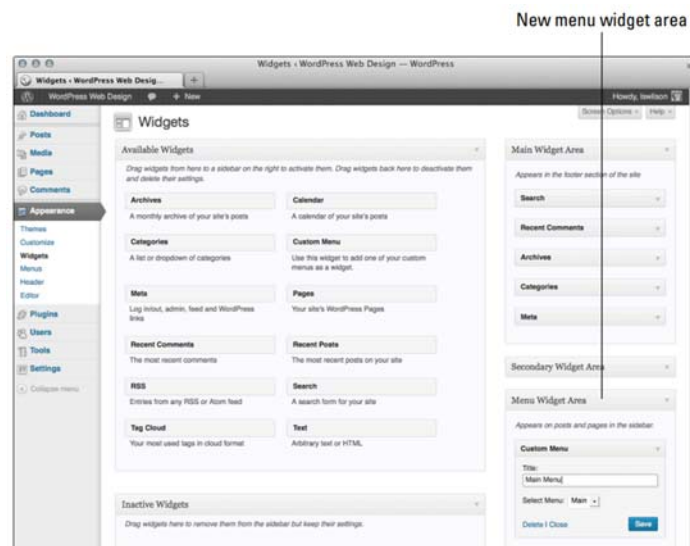
### DISPLAYING CUSTOM MENUS USING WIDGETS

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Since WordPress also offers you a Custom Menu widget that you can add to your theme, you are not need to use the `wp_nav_menu()`; template tag to show the menus on your website. Instead, you may use widgets to display the navigation menus on your website rather than template tags. This is particularly useful if you've made many menus to utilise across your website in different locations. (For additional details on using WordPress widgets, see Chapter 10). In order to manage the Custom Menu widget display, your first step is to register an unique widget area for your theme. To achieve this, edit the `function.php` file for your theme and insert the following code somewhere before the closing `<?>`:

```
// ADD MENU WIDGET
if ( function_exists('register_sidebars') )
    register_sidebar(array('name'=>'Menu',));
```

These few lines of code add a new Menu Widget Section to your Dashboard's Widgets page. To indicate that you want to show a custom menu in that location, drag the Custom Menu gadget into the Menu Widget Area at this point. You may choose which menu to show from the Choose Menu drop-down list if you have more than one menu. Figure 1 displays the Menu Widget Area with both the Custom Menu widget installed.



**Figure 1: Illustrated the on the Widgets page, add the Custom Menu widget to the Menu Widget Area.**

Go over to the Edit Themes page (choose Appearance Editor), choose the Header template (`header.php`) file, and add following lines of code to the section where you want the Menu Widget Area to appear to add the Menu Widget Area to your theme [1]:

```

<ul>
<?php if ( !function_exists('dynamic_sidebar') || !dynamic_sidebar('Menu') ) :
?>
<?php endif; ?>
</ul>

```

These lines of code tell WordPress that you want information contained in the Menu Widget Area displayed on your site.

### Adding Support for Custom Post Types

As more developers get comfortable with their usage, custom post types and custom taxonomies will undoubtedly play a significant role in the features of plugins and themes. They have increased the content management system (CMS) capabilities of WordPress. Developers may construct new content categories that are distinct from pages and blogs, such movie reviews or food articles, using custom post types. Developers may establish new kinds of content groupings independent of categories and tags using custom taxonomies, such as categories for movie reviews or seasons for recipes, such as autumn, spring, or winter dishes.

Pages and posts are great, general content containers. A page may have a parent, making it timeless material with a hierarchical structure (forming a nested, or hierarchal, structure of pages). A post is a piece of material that is arranged into categories and tags and is listed in a linear (not hierarchical) order depending on when it was published. What happens if you desire a combination of these features? What if you want material that just shows the publishing date and doesn't show up in the post listings or have categories or tags? This need to modify content kinds is satisfied by custom post types [2].

By default, WordPress already has different post types built in to the software, ready for you to use. These default post types include:

- a. Blog posts
- b. Pages
- c. Menus
- d. Attachments
- e. Revisions

You may develop brand-new, practical content kinds for your website using custom post types, and you can publish them to your site in a clever, simple method. There are many applications for employing custom post types, but the following ideas could help spark your creativity. These are additionally some of the most well-liked and practical applications that others have used on websites.

- a. Photo galleries
- b. Podcasts or videos
- c. Book reviews

- d. Coupons and special offers
- e. Events calendars

### Creating a custom post type

You must ensure that your WordPress theme has the proper code and functionality in order to build and utilise custom post types on your website. You construct a simple, general custom post type called "Generic Content" in the following stages, and later on in this part, you can discover comprehensive information on the many parameters you may use with particular post types to meet your demands [3]:

**1. On your Dashboard, choose Appearance ⇌ Editor.**

The Edit Themes page opens.

**2. Click the Theme Functions template link to open the functions.php file.**

The Theme Functions template opens in the text editor in the middle of the page.

**3. Add the custom post type code to the bottom of the Theme Functions template.**

Scroll down to the bottom of the functions.php file and include the following code to add a Generic Content custom post type to your site:

```
// ADD CUSTOM POST TYPE
add_action( 'init', 'create_post_type' );
function create_post_type() {
    register_post_type( 'generic-content',
        array(
            'labels' => array(
                'name' => __( 'Generic Content' ),
                'singular_name' => __( 'Generic Content' )
            ),
            'public' => true
        )
    );
}
```

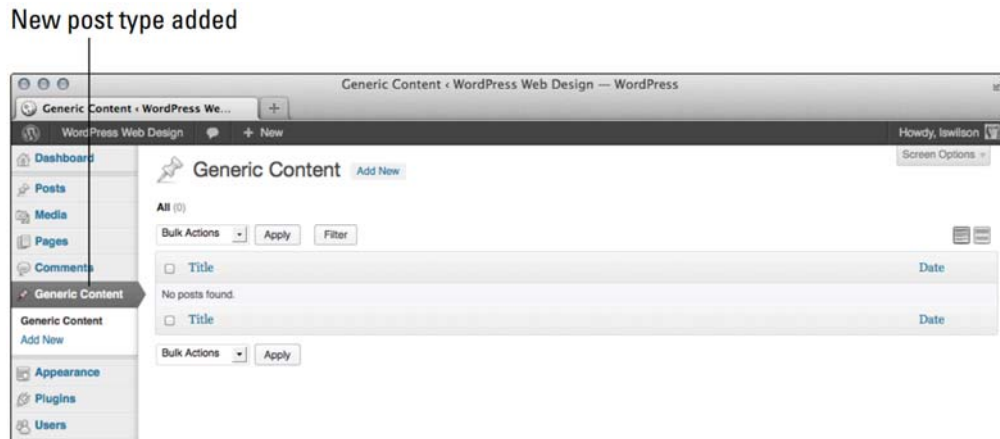
**Figure 2: Displayed the Code of Functions.**

The function `register_post_type()`; can accept several arguments and parameters, which I detail in Table 12-7. You can use a variety and a combination of arguments and parameters to create a specific post type. You can find more information on custom post types and using the `register_post_type()`; function on the WordPress Codex page at [http://codex.wordpress.org/Function\\_Reference/register\\_post\\_type](http://codex.wordpress.org/Function_Reference/register_post_type).

**4. Click the Update File button to save the changes made to the functions.php file.**

The Custom Post Type UI plugin from WebDevStudios offers you a simple interface on your WordPress Dashboard if you don't feel like entering all this code in the Theme Functions file. This plugin also eliminates the need to write the code in the theme functions (functions.php) file and makes it easier to build new post kinds on your website. Visit <http://wordpress.org/extend/plugins/custom-post-type-ui> to get the free plugin. After you've

finished adding the Generic Content post type to your website, it will appear in the Dashboard's left navigation menu, as shown in Figure 3.



**Figure 3: Illustrated the Generic Content post type is added to the Dashboard.**

The new custom post type allows you to upload and publish new material in the same way as blog posts do. The published material is handled separately, much like static pages, rather than being included to the chronological listing of blog entries. See the custom post type's permalink to see how it incorporates the post type name, Generic Content, into its permalink structure. Like this: <http://yourdomain.com/genericcontent/new-article> [4], [5].

An actual example I used on the website I created for the No Rules Theatre Company, that you are able to see at <http://norulestheatre.org>. For the performances that the theatre presents each season, this site employs a Shows custom post type to provide bespoke information. See how the character data types for the No Standards Theatre Company site were developed and used by referring to the parameters and details in the previous while reading the lines of code, which are provided below.

#### // ADD CUSTOM POST TYPE: SHOWS

```
add_action( 'init', 'create_my_post_types' );
function create_my_post_types() {
    register_post_type( 'shows',
        array(
            'labels' => array(
                'name' => __( 'Shows' ),
                'singular_name' => __( 'Show' ),
                'add_new' => __( 'Add New Show' ),
                'add_new_item' => __( 'Add New Show' ),
                'edit' => __( 'Edit' ),
                'edit_item' => __( 'Edit Show' ),
                'new_item' => __( 'New Show' ),
                'view' => __( 'View Show' ),
                'view_item' => __( 'View Show' ),
                'search_items' => __( 'Search Shows' ),
                'not_found' => __( 'No shows found' ),
                'not_found_in_trash' => __( 'No shows found in Trash' ),
```

```

'parent' => __( 'Parent Show' ),
),
'public' => true,
'show_ui' => true,
'publicly_queryable' => true,
'exclude_from_search' => false,
'menu_position' => 10,
'menu_icon' => get_stylesheet_directory_uri() . '/img/nrt-shows.
png',
'hierarchical' => true,
'query_var' => true,
'rewrite' => array( 'slug' => 'shows', 'with_front' => false ),
'taxonomies' => array( 'post_tag', 'category'),
'can_export' => true,
'supports' => array(
'post-thumbnails',
'excerpts',
'comments',
'revisions',
'title',
'editor',
'page-attributes',
'custom-fields')
)
)

```

Click the Screen Settings tab at the top right of the Menus page (select Appearance Menus) to add custom post kinds to the available menu choices. You may activate your own post kinds in the menus you design by checking the box next to Post Types. Only if custom post types are enabled in your theme do the Post Types show up in the Screen Settings.

### Building a template for a custom post type

Unless you develop a special template for your custom post type, custom post types by default utilise the `single.php` framework in your theme. The default WordPress `single.php` template could be too restrictive for your post type. This depends on the kind of material you want to add and if you want to use HTML and CSS markup to apply various formats and decorations to your custom post type [6].

I offer the code to create a simple Generic Content specially made post in the section above. The WordPress Dashboard's Generic Content option then displays once you've added it. Choose Generic Content Add New, add some material to a new post, and then publish it. Create a new Generic Type of content, for instance, and give it a Test title and Test slug. As the Generic Content type doesn't yet have a unique template, it utilizes the `single.php` template, which produces articles that are identical to the norm.

Reset your permalink settings if a Not Found page occurs when you attempt to view a customization options post type entry. In the Dashboard, choose Settings ⇌ Permalinks, and then

press the Save Changes button. By doing this, WordPress is compelled to add the new custom post category permalink formats and reset your site's permalinks.

Add a new `single-posttype.php` basic framework (posttype is the first parameter supplied to the register post type function from the prior step) to create a template specifically for the Generic Content post type. `Single generic-content.php` is the template file specifically designed for the Generic Information post type in this illustration. Only instances of the Generalized Content post type will display any changes made to this template file [7].

In keeping with the prior chapter's section on "Creating and utilising template components," the `single-generic-content.php` file for the Twenty Thirteen theme has the following fundamental structure:

```
<?php get_header(); ?>
<div id="container">
  <div id="content" role="main">
    <?php get_template_part('loop', 'generic-content'); ?>
  </div>
</div>
<?php get_sidebar(); ?>
<?php get_footer(); ?>
```

The Loop for something like the Generic Content post type entry may be easily customized by utilising the template section of a `loop-generic-content.php` file.

### Adding support for post formats

You may define a distinct content presentation and layout for certain sorts of specified posts by incorporating the post formats into your theme. In contrast to custom post types which I discuss previously in this chapter, WordPress has already allocated post formats for you; it is up to you to decide which comment format, if any, you wish to use in your theme. But you may use any or all of them based on your requirements. I hope I'm not making this seem too complicated. These are some illustrations of the digital infrastructure that WordPress has presently designed:

- a. **Aside:** A brief post in this type is used to express a seemingly unrelated notion or opinion. An Apart usually doesn't have a post title or categorization or tag designations. An Apart is only a brief, unrelated idea that you offer on their blog; it is not a whole posting.
- b. **Audio:** For sharing audio files or podcasting, use the Audio post format. Audio posts often include relatively little text and instead feature features like a built-in audio player that readers simply click to access audio files.
- c. **Chat:** It is possible to style this post type such that it absolutely resembles a chat or instant messaging window. It is a transcript of an instant messenger session.
- d. **Gallery:** You may click on any of the pictures in this gallery to view a bigger version. Often, these post styles merely show a gallery without any content but they may have a title.



- e. **Image:** One picture may be displayed in this post type, for example in a searchable archive. Text or a caption for the picture accompanying the post could be or might not be included.
- f. **Link:** You may use this to present a brief article that contains a link that visitors wish to share with their audience. These post styles often include a title and, on occasion, a brief description of the link you're sharing.
- g. **Quote:** This post type lets you display some citation on your blog. Users often add the quotations and the source's byline.
- h. **Status:** With Twitter in mind, this offers a compact regular update often restricted to 200 words or fewer.
- i. **Video:** This presents your blog posts in their were hence, which is simply a regular blog post even without added special structuring.
- j. **Standard:** This displays your blog posts in the default manner, meaning it's just an ordinary blog post without special formats applied to it.

You can find a good, real-world example of post formats on my website at <http://lisasabin-wilson.com>. My site separates the formats I've chosen through the use of individual post styling to designate the different formats [8].

#### Adding post formats to a theme

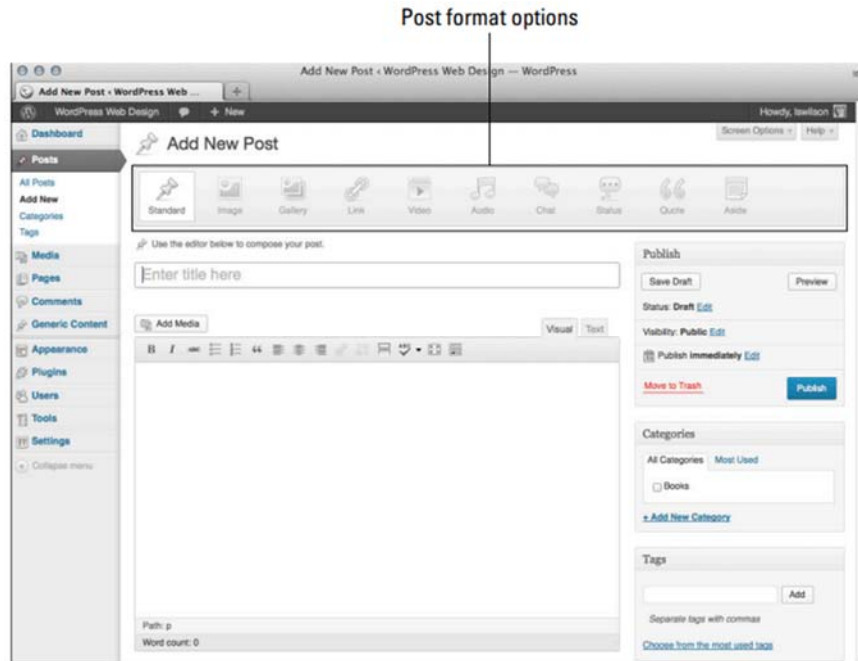
1. **From your Dashboard, choose Appearance ⇌ Editor.**
2. **Click the theme functions (functions.php) file in the Templates list on the right to open it.**
3. **In the text editor box, add the following function on a new line prior to the closing ?> tag:**

```
add_theme_support( 'post-formats', array( 'aside', 'chat', 'gallery', 'image', 'link', 'quote', 'status', 'video', 'audio' ) );
```

All nine of the post formats that are available are included in the code example that comes before it. You don't have to incorporate all nine; you may only include the ones you believe would have to go best with your theme and exclude the others.

4. **Click the Update File button to save the changes made to the functions.php file.**

After you save your updated theme functions directory with the post formats support enabled, your website won't immediately alter. Visit the Add New Post page by selecting Posts ⇌ Add New from the Dashboard to check what WordPress has added to your website. Figure 4 illustrates how icons corresponding to the various post types display at the top of the screen. All nine post format choices are displayed as possible formats in the figure since I added all nine of them. If you don't choose a particular format for your article, the tenth format choice you see is called Standard.



**Figure 4: Illustrated the Adding Post Format Options on the Add New Post page.**

### Using template tags for post formats

It's not enough to just add post format support to your theme. If you're going to the trouble of providing post format support, you need to give each sort of format some distinctive appearance. If not, the purpose of include your various post formats in your theme will be defeated since they will all seem identical to the rest of your blog articles. There are two ways you may give each of your post styles a distinctive display:

1. **Content:** Content: You may specify what material you wish to show for each format. For instance, if you don't want the title for an Apart to be shown, leave the template tag that calls it in place but keep the template tag that calls the title for your video post type.
2. **Style:** About style, check out the following sidebar titled "Post class specified." I go through how to use the post class (); tag's HTML markup in the sidebar. Each of your formats has a unique CSS class applied to it. Use these CSS classes to give each of your many post types its own set of fonts, colours, backgrounds, and borders.

Making the content classifications you want to show for each post type is the first step in adding distinctive designs for them. I discussed the nine different post styles earlier in this chapter and offered some suggestions for how to use them on your website. There are many options, and the decision is ultimately yours. to learn more about the many content-related template tags that you might apply to these sections. You create a simple, condensed Main Index (index.php) file to be used on your website and add post format support in the subsequent phases. This is only an example template that you may use as a guide for making your own unique display for your post types. There is no time like the present; do these actions. [9]:

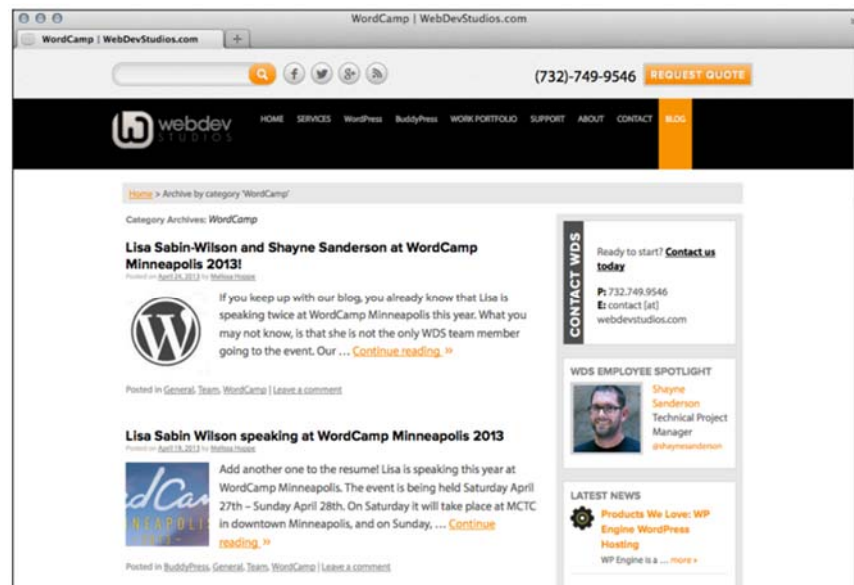
1. Open your favorite text editor, such as Notepad (Windows) or TextMate (Mac).
2. Enter the code in Listing 12-3 to create a simple template for post formats.

3. Save your file as index.php on your local computer.
4. Upload the file into your theme folder (located in the /wp-content/ themes directory), replacing your existing index.php file.

### Adding support for post thumbnails

The process of linking a picture to a post and selecting the appropriate size each time is greatly reduced by post thumbnails or featured photos. Thumbnail photos with short text excerpts are a common technique to present material in WordPress themes. All of the thumbnail images should be the same size and position inside your theme. Users had to open their photographs in an image-editing tool (like Photoshop) and crop and resize them before WordPress included post thumbnails. Alternatively, users had to create complex programs that would dynamically resize photos; however, this wasn't the best option since these scripts were often resource-intensive on web servers. What if your photographs were cropped and resized by a content management system to the precise measurements you specify? Indeed, WordPress accomplishes it for you with very little change. When you submit a picture to WordPress, it automatically generates three copies of the image depending on the dimensions you choose on the Media Settings page of your Dashboard (select Setting ⇔ Media):

1. **Thumbnail size:** Default dimensions are 150px x 150px.
2. **Medium size:** Default dimensions are 300px x 300px.
3. **Large size:** Default dimensions are 1024px x 1024px.



**Figure 5: Illustrated the Post thumbnails on WebDevStudios.com.**

Hence, when you submit a single picture, your web server really stores that image in four different sizes: thumbnail, medium, big, and the original (full size) image you uploaded. Pictures are normally cropped and scaled appropriately when used in postings, and you may choose which size to use in the uploader's image choices. The uploader may be found on your WordPress Dashboard's Add New Post, Add New Webpage, and Add New Media pages. You may choose a specific picture

to serve as the featured image of the post inside the WordPress image uploader, and you can then use the Featured Images function when you add to your theme to include some template elements to show your selected featured image alongside your content. With this, you may make the very popular Magazine or News Type themes for WordPress websites. Figure 5 shows my company's website, <http://webdevstudios.com>, where we employ featured pictures and post thumbnails to display a thumbnail with each post snippet [10]

I also discuss adding support for additional image sizes in addition to the default image sizes that are configured on the Media Settings page on your Dashboard in the section "Adding custom image sizes for post thumbnails" later in this chapter. This is useful if you want to show a much smaller thumbnail or a bigger version of the medium size but not as huge as the large size in certain areas of your website.

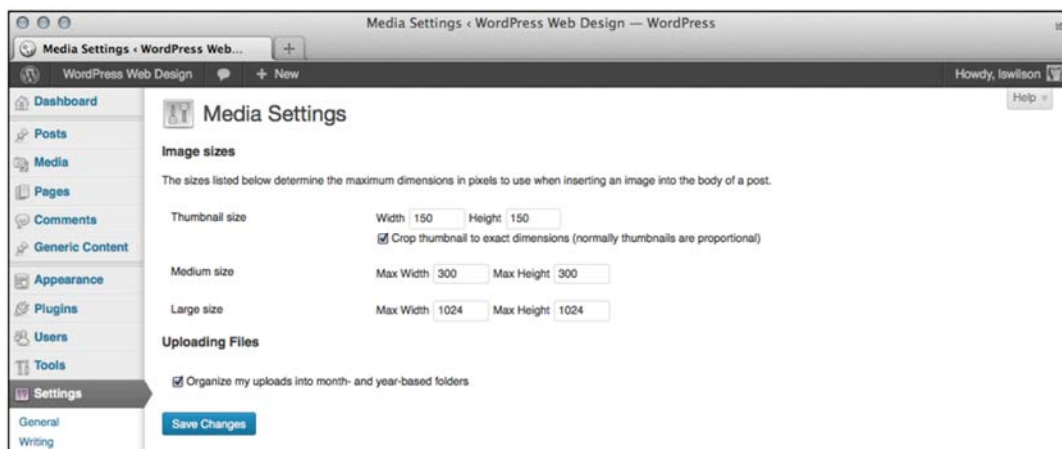
### Adding post thumbnails to a theme

Add the following line of code somewhere before the closing `</?>` in your theme's functions (functions.php) file to enable post thumbnails.

```
add_theme_support( 'post-thumbnails' );
```

You may utilise the featured image for your articles after adding this line of code since it needs the Post Thumbnails mechanism to be turned on. Next, utilising the built-in featured image located in the WordPress image downloader and on the Add New Document indexing, where you compose and publish your articles, you can begin designating photos as featured. After you begin using featured photos in your articles, be sure to put the proper tag in your template or templates so the featured image will show up on your site in the location you choose. For instance, open your template's index.php and include the following piece of code wherever to include the featured image's standard thumbnail size in your posts:

```
<?php if ( has_post_thumbnail() ) { the_post_thumbnail('thumbnail'); }?>
```



**Figure 6: Illustrated the Media Settings page on the Dashboard.**

The featured picture appears if there is one, which is determined by the first portion of that line of code. Nothing is returned if there is no featured picture for the post. As illustrated in Figure 6 for medium, big, and full-sized photos, you may additionally include the additional default image sizes established in the Media Settings page on the Dashboard by using the following tags:

```
<?php if ( has_post_thumbnail() ) { the_post_thumbnail('medium'); ?>
<?php if ( has_post_thumbnail() ) { the_post_thumbnail('large'); ?>
<?php if ( has_post_thumbnail() ) { the_post_thumbnail('full'); ?>
```

### Adding custom image sizes for post thumbnails

Thumbnail, medium, big, and full are the preset, default image sizes in WordPress. If you have a place on your site where you wish to show photos with other dimensions, WordPress makes it rather simple to add customizable image sizes in your theme functionalities file. The featured picture in your theme is then shown using the post thumbnail function.

There are no restrictions on the picture sizes you may upload, and this example demonstrates how to add an image size of 600 px by 300 px. Beside the previous function add theme support('post-thumbnails') discussed in the earlier part of this chapter titled "Adding the post thumbnails to a theme," add the following line to your theme's functions file (functions.php):

```
add_image_size('custom', 600, 300, true);
```

This code instructs WordPress to make a second copy of the photos you submit, crop them, and resize them to 600 pixels wide by 300 pixels high. Take note of the add image\_size\_function's four parameters:

- a. **Name (\$name):** Provide a special name to the picture size that you may subsequently use in your template tag. In my illustration, I call the new picture size "custom."
- b. **Width (\$width):** Give the width of the picture a numerical value. I set the width in my example to 600.
- c. **Height (\$height):** Provide a numerical height dimension for the picture size. I specify the height in my example as 300.
- d. **Crop (\$crop):** This parameter is optional and tells WordPress whether it should crop the image to exact dimension, or do a soft proportional resizing of the image. In my example, I set this to true the accepted arguments are true or false [11].

Similar to adding default image sizes, adding the custom screen resolution to your template to show the picture you've selected as featured differs only in that the name of the image is specified in the template tag's brackets. Use the following tag to add in my examples custom picture size:

```
<?php if ( has_post_thumbnail() ) { the_post_thumbnail('custom'); ?>
```

## REFERENCES

- [1] B. Hernandez-Ocana, O. Chavez-Bosquez, J. Hernandez-Torruco, J. Canul-Reich, and P. Pozos-Parra, "Bacterial foraging optimization algorithm for menu planning," *IEEE Access*, 2018, doi: 10.1109/ACCESS.2018.2794198.
- [2] J. Böhm, "Excel for Chemists — A Comprehensive Guide," *Zeitschrift für Phys. Chemie*, 1999, doi: 10.1524/zpch.1999.211.part\_1.119.
- [3] E. J. Billo, "Creating Custom Menus and Menu Bars," in *Excel® for Chemists*, 2003. doi: 10.1002/0471220582.ch18.

- [4] E. J. Billo, "Custom Menus," in *Excel for Chemists®*, 2011. doi: 10.1002/9781118093955.ch22.
- [5] K. Lacković, T. Horvat, and L. Havaš, "Information system for support in Basketball game and player analysis," *Informatologia*, 2018, doi: 10.32914/i.51.1-2.7.
- [6] C. Gan, "A survey of WeChat application in Chinese public libraries," *Libr. Hi Tech*, 2016, doi: 10.1108/LHT-06-2016-0068.
- [7] L. I. Krešimir, L., Horvat, T., & Havaš, "Information System for Performance Evaluation in Team Sports," *Int. J. Bus. Manag. Technol.*, 2018.
- [8] M. R. Wirajaya, S. Abdussamad, and I. Z. Nasibu, "Rancang Bangun Mesin Penetas Telur Otomatis Menggunakan Mikrokontroler Arduino Uno," *Jambura J. Electr. Electron. Eng.*, 2020, doi: 10.37905/jjee.v2i1.4579.
- [9] C. Walnum, "Internet Explorer construction kit for dummies," --*For dummies*, 2005.
- [10] G. N. Gregoriou, "Quantitative Models for Performance Evaluation and Benchmarking: Data Envelopment Analysis with Spreadsheets," *J. Wealth Manag.*, 2015, doi: 10.3905/jwm.2015.17.4.114.
- [11] J. Zhu, "Quantitative Models for Performance Evaluation and Benchmarking," *Oper. Res.*, 2009.

## CHAPTER 16

### UNDERSTANDING PARENT AND CHILD THEMES

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It's nice to use a theme precisely how the theme designer intended. A rapid theme update is extremely simple to do if a new version is published that resolves a problem with browser compatibility or adds functionality provided by a new version of WordPress. Yet there's a strong possibility you'll want to change the theme's structure, add new features, or fiddle with the look. If you alter the theme, you must alter it once again in order to update to a recently published version. If you were only able to update customized themes with fresh features as soon as they're available. Thankfully, child themes provide you this theme option that combines the best of both worlds. The purpose of this chapter is to explain child themes, how to make a parent theme child theme ready, and how to make the most of child themes [1].

#### Customizing Theme Style with Child Themes

An assortment of template files, style sheets, graphics, and JavaScript files make up a WordPress theme. The layout and style that site visitors see are controlled by the theme. A child theme, or a group of instructions, may override the files of such a theme when it is configured correctly as a parent theme. This makes that a child theme may only change certain aspects of the parent theme's design, aesthetics, and functionality. By using examples, you can comprehend kid themes the fastest. This section demonstrates how to make a straightforward child theme that alters the parent theme's aesthetic. Twenty Thirteen is the current default WordPress theme. Figure 1 depicts how an example site using the Twenty Thirteen theme looks.

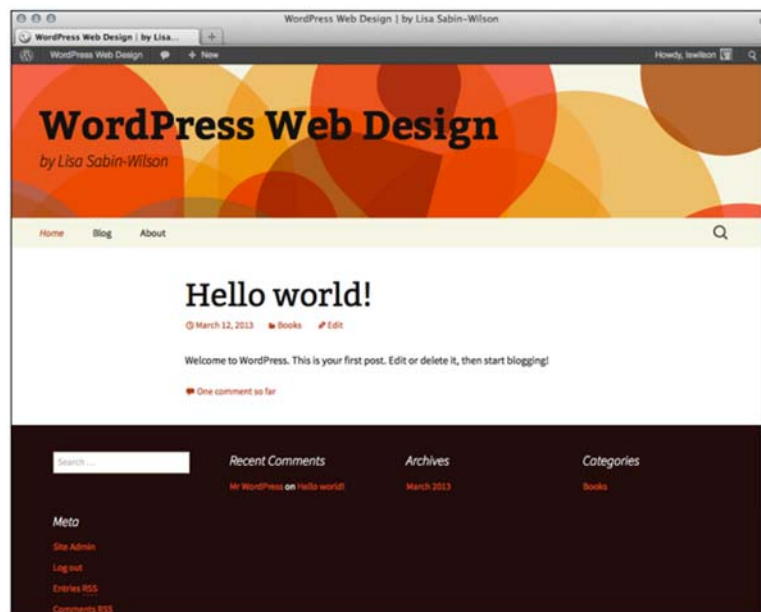


Figure 1: Illustrated the Twenty Thirteen theme.



As Twenty Thirteen is child theme ready and most likely already exists on your WordPress website, Twenty Thirteen is an excellent choice for the creation of an example child theme. The new kid theme is known as Twenty Thirteen Child to keep the names short and straightforward.

### Creating a child theme

A child theme must be located in a directory within the `/wp-content/themes` directory, just like standard themes. The directory where the child theme will be stored must be added before the child theme can be created. Create a new directory with twenty-three children for this example inside of the `/wp-content/themes` directory.

Create a `style.css` file and include the required theme headers to add the twenty thirteen-child directory as a template and make it a child of the Twenty Thirteen theme. To do this, enter the following code into your preferred plain text or code editor, such as Notepad (Windows) or Text Mate (Mac), and save the document as `style.css`:

```
/*
Theme Name: TwentyThirteen Child
Description: My fabulous child theme
Author: Lisa Sabin-Wilson
Version: 1.0
Template: twentythirteen
*
```

Typically, you find the following headers in a WordPress theme:

1. **Theme Name:** This name is visible to theme users on WordPress' back end.
2. **Description:** The user may get any more information about just the theme in this header. Currently, only the Manage Themes page (choose Appearance Themes) displays this header.
3. **Author:** Authors of the theme are recognized in this header. Just the Manage Themes page (choose Appearance ⇌ Themes) exhibits this header at the moment.
4. **Version:** The version number is particularly helpful for tracking down out-of-date themes. When making changes to a theme, it's usually a good idea to update the version number.
5. **Template:** A theme becomes a child theme when this header is used. This header's value informs WordPress of the underlying theme's directory name. Due to the fact that your sample child theme utilizes Twenty Thirteen as the parent. The Template header in CSS must contain the number 13 in it (the directory name of the Twenty Thirteen theme).

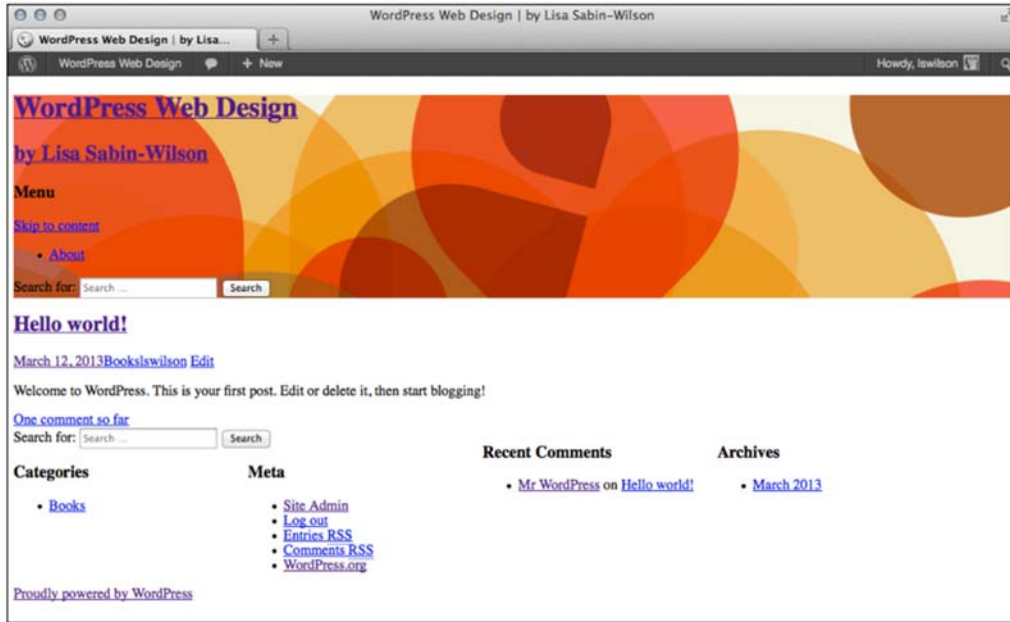
The new Twenty Thirteen Child theme should now be set as your active theme. The new theme doesn't appear entirely correct, as seen in Figure 2. The issue is that while the parent theme's `style.css` file was replaced with the new child theme, the new child theme's `style.css` file is unfilled. You could just manually copy and paste the `style.css` file's contents from the parent theme, but it would limit the flexibility of child themes. Instead, as I explain in the next section, you should only make changes to the styles and/or features that you would like to change [2].

One of the great things about Cascading Style Sheets (CSS) is how rules can override one another. If you list the same rule twice in your CSS, the rule that comes last takes precedence. For example:

```

a {
color: blue;
}
a {
color: red;
}

```



**Figure 2: Illustrated the Twenty Thirteen Child theme.**

**Loading a parent theme’s style**

While this illustration is excessively simplistic, it effectively illustrates my point. All links (a tags), according to the first rule, should be purple, whereas links, according to the second rule, should be red. The links will now be red since CSS states that the most recent command takes priority. By overriding the parent theme's rules, you may use this CSS feature to selectively alter all of the style of the parent theme. So how can the style.css file of the child theme be loaded so that the parent theme's styling is carried over? Thankfully, CSS provides another fantastic feature that makes it simple for you to accomplish this. [3]. Just add the following line at the end of the TwentyThirteen Child theme's style.css file [3].

```

/*
Theme Name: TwentyThirteen Child
Description: My fabulous child theme
Author: Lisa Sabin-Wilson
Version: 1.0
Template: twentythirteen
*/

```

A number of things are going on here, so let me break it down piece by piece:

1. `@import`: This tells the browser to load another stylesheet. Using this allows you to pull in the parent stylesheet quickly and easily.
2. `url('...')`: This indicates that the value is a location and not a normal value.
3. `(../twentythirteen/style.css')`: This is the location of the parent stylesheet. Notice the `/twentythirteen` directory name. This needs to be changed to match the `Template` value in the header of the CSS so that the appropriate stylesheet is loaded.

After you refresh your site, you see that the child theme's design and layout match the original Twenty Thirteen theme. The updated child theme now looks like Figure 1, shown earlier.

### Customizing the parent theme's styling

Your Twenty-Thirteen Child theme has been configured to coordinate with the Twenty Thirteen Parent theme. The `style.css` file for the Twenty-Thirteen Child theme may now be updated with new styling. The process of customizing is easily shown by adding a style that changes all `h1`, `h2`, and `h3` headers to uppercase.

`/*`

**Theme Name: TwentyThirteen Child**

**Description: My fabulous child theme**

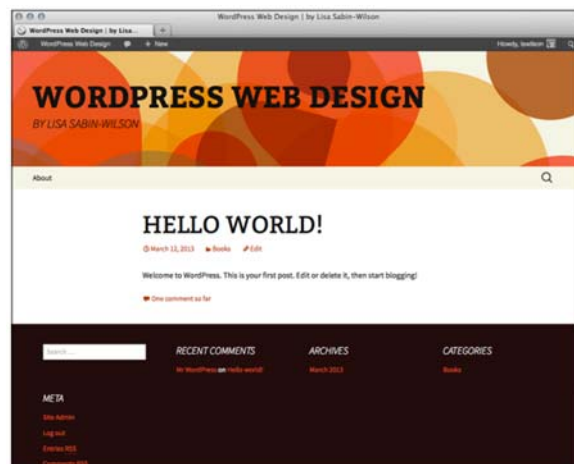
**Author: Lisa Sabin-Wilson**

**Version: 1.0**

**Template: twentythirteen**

`*/`

As you can see, you may create a new responsive website that adds certain adjustments to an existing collection by adding only a few lines to a `style.css` file. Not only is it fast and simple to implement, but nothing in the parent subject has to be changed for it to operate. As a result, whenever the parent theme receives an update, you may upgrade the parents to get the new features without having to redo your customizations. Similarly, more intricate adaptation's function. After the importation rule that includes the parent stylesheet, just add the new rules.



**Figure 3: Illustrated the updated child theme with uppercase headings.**

## Using images in child theme designs

Images are often used in themes as beautiful finishing touches. Usually, you add these photos to the theme's image directory. Similar to how a parent theme could make reference to photos in its style. Your child themes may each have their own pictures directory and css file. The usage of these pictures may be seen in the examples below.

### Using a child theme image in a child theme stylesheet

It is typical to include a child theme image together in child theme stylesheet. Just place the new image in the child theme's images directory and reference it in the style.css file to do this. Follow these steps to obtain a sense of how this procedure works. [4], [5]:

1. Create an images directory inside the child theme's directory `/wp-content/themes/twentythirteen-child/images`.

2. Add an image to the directory.

For this example, I added the `body-bg.png` image, which is a simple white-and-tan striped image that I created in Photoshop.

3. Add the necessary styling to the child theme's `style.css` file, as follows:

```
/*
Theme Name: TwentyThirteen Child
Description: My fabulous child theme
Author: Lisa Sabin-Wilson
Version: 1.0
Template: twentythirteen
*/
@import url('../twentythirteen/style.css');
body {
background: url('images/body-bg.png') repeat-x;
}
```

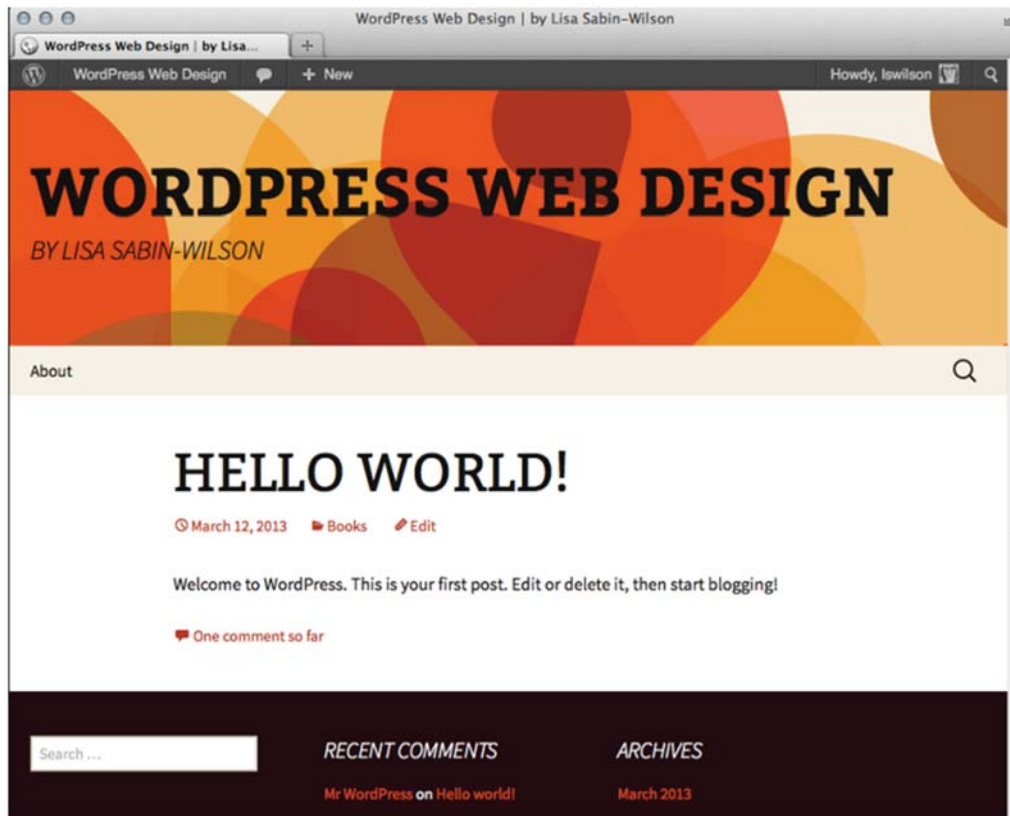
With a quick refresh of the site, it now has a new background, as shown in Figure 4. You can see how the background changed from plain white to a white-and-tan striped image.



Figure 4: Illustrated the Twenty Thirteen Child theme after editing the background image.

## Using a parent theme image in a child theme stylesheet

Images with child themes are suitable for the majority of uses. Yet, there are situations when utilising pictures from the parent theme is preferable. Although it is possible to simply transfer the parent theme image folder and all of its pictures to the child theme, this would prevent the child theme from matching the parent theme in the event that the parent theme image eventually changes, such as after an update. Thankfully, you can use the `@import` rule to refer to a parent theme's image in the same way that you can use its style.css file. A magnifying glass symbol as mentioned in Figure 5, that denotes the search area appears on the right side of the Twenty Thirteen design's navigation menu section, and when clicked, the search form is shown. [6].



**Figure 5: Illustrated the Magnifying glass in the Twenty Thirteen navigation menu area.**

The magnifying glass symbol is added in front of the post title in this example. You can easily apply a tweak to the child theme's style since the icon image already exists in the parent theme. To make this modification, edit the following CSS file:

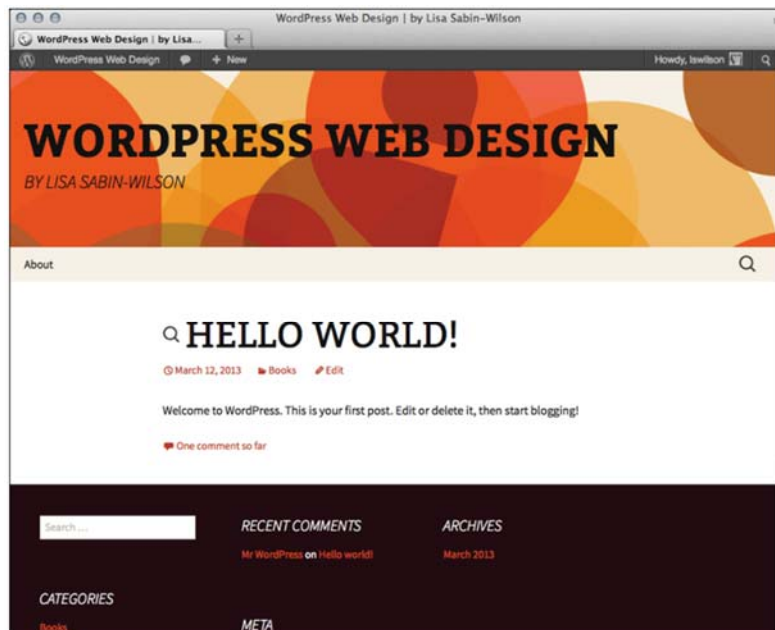
```

/*
Theme Name: TwentyThirteen Child
Description: My fabulous child theme
Author: Lisa Sabin-Wilson
Version: 1.0
Template: twentythirteen
*/
@import url('../../twentythirteen/style.css');

```

```
.entry-title {
background: url('../twentythirteen/images/search-icon.png') left center
no-repeat;
padding-left: 30px;
}
```

Save the file and refresh your website to show the magnifying glass before the entry title. See Figure 6.



**Figure 6: Illustrated the magnifying glass before the entry title.**

### Using a child theme image in a parent theme stylesheet

You may have wondered in the preceding instances whether it was feasible to swap out an image from the parent theme's stylesheet with one from the child theme's directory. No, it isn't feasible since doing so would involve altering the stylesheet of the parent theme. The purpose of a child theme is to prevent modifications to the parent theme. But, you can simply add an overriding rule to the child theme's stylesheet that refers to the new image to override the parent theme's rule to refer to the new picture. You position the magnifying window icon to the left of something like the entry title in the previous example. Take it a step further; the entry title's magnifying glass symbol is tiny. You can do more with a bigger symbol. Use a different magnifying glass icon for this example, which you can get at <http://lisasabin-wilson.com/magnifying-glass.jpg>. To save a picture to your local computer, right-click the image in your browser. (Don't forget where you stored it!) The following style will appear once you upload the required picture as `magnifying-glass.jpg` to your child theme's images directory. The newly downloaded magnifying glass icon is substituted for the parent theme's in the css file [7]:

```
/*
```

**Theme Name: TwentyThirteen Child**

**Description: My fabulous child theme**

**Author: Lisa Sabin-Wilson**

**Version: 1.0**

**Template: twentythirteen**

**\*/**

```
@import url('../twentythirteen/style.css');
```

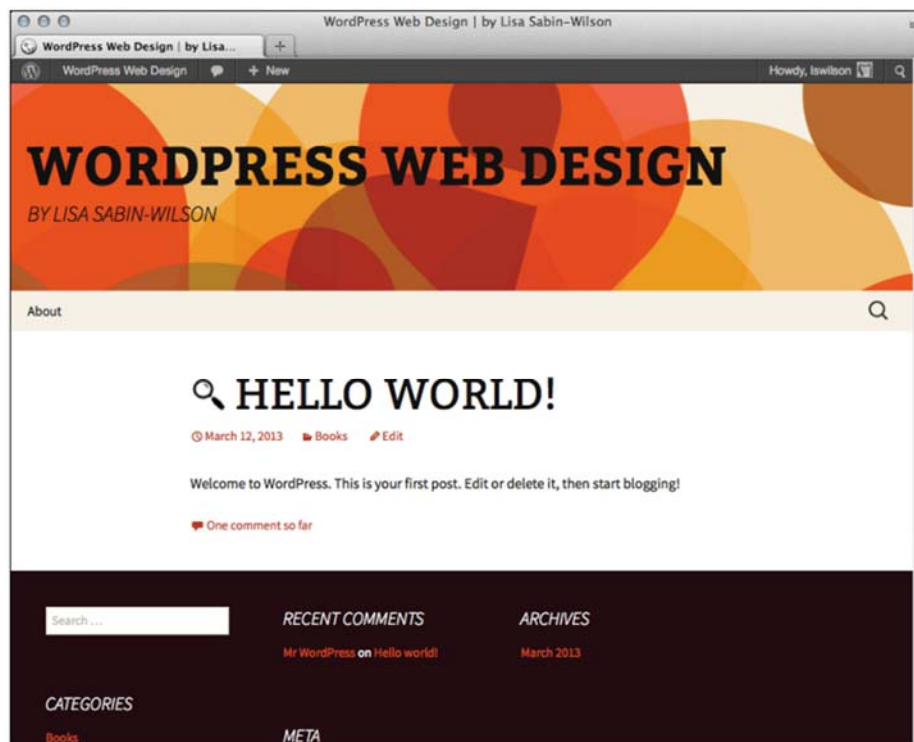
```
.entry-title {
```

```
background: url(images/magnifying-glass.jpg) left center no-repeat;
```

```
padding-left: 50px;
```

```
}
```

You'll see that other rules than those governing the background are changed to override parent theme design that doesn't match the new symbol properly, such as the inclusion of the padding-left: 50px to ensure that the magnifying glass is placed correctly. The new magnifying glass is now shown in your child theme to the left of something like the entry title. If you ask me, the new appearance shown in Figure 7 is rather good.



**Figure 7: Illustrated the new magnifying glass icon.**

You can't directly replace parent theme images. Rather, you must provide a new image in the child theme and override the parent's styling to refer to this new image.

### **Modifying Theme Structure with Child Themes**

The CSS of an existing theme may be adjusted using a child theme, as shown in the section before. This is a very potent talent. This method enables a skilled CSS developer to create an extensive collection of layouts and designs. The power of kid themes, however, is only getting started. Yet,



each child theme replaces the parent theme's aesthetic. The template files of the parent theme may also be overridden by the child theme's css file. Moreover, child themes don't only replace template files; they may also provide their own configuration files if necessary. WordPress uses template files, which are PHP scripts, to display various site views. The sort of material being seen in your web browser is known as a site view [8]:

1. Home: The home page of your website
2. Category archive: A page that displays the archives within a particular category
3. Individual post: A page that displays a single post from your blog
4. Page content: A page that displays the content of a static page from your site

Index.php, archive.php, single.php, page.php, attachment.php, and search.php are a few instances of typical template files. You may be curious about the benefit of altering parent theme template files. While altering a parent theme's stylesheet may provide extremely strong design control, it cannot add new content, alter the site's core structure, or alter the way the theme works. You must change the template files in order to get that degree of control.

### **Overriding parent template files**

The child theme file is used when both the parent theme and child theme provide the same template file. Overriding is the process of changing the parent template file from the original. Sometimes, producing a desired result necessitates altering one or two of the template files, even though doing so can defeat the purpose of using a child theme because, if you're going to rewrite every template file to make it distinct from the parent theme, you might as well develop a completely novel theme that does not depend on a parent theme. Copying a template file from the parent theme container to the child theme folder is the simplest approach to change a particular template file in a child theme. The modifications you make to the file after copying it will be reflected in the child theme. The footer.php file is a fantastic example of a word document that you may normally change. It is possible to add site-specific branding by customizing the footer.

### **Adding new template files**

A child theme may add template files that are missing from the parent theme or replace those that are already there. While you may never need their child themes to accomplish this, having this option can provide your designs more flexibility. For instance, using page templates makes this strategy most effective. Figure 8 depicts Twenty Thirteen's default page template. As WordPress automatically eliminates the right sidebar when you don't include any widgets in the Secondary Widget Section, the Twenty Thirteen theme does not include a One Column, No Sidebar page template. But what if you want to exclude the sidebar on only one page so it may be shown full width and you use the Secondary Widget Section throughout your whole website? You may create a new WordPress theme in a child theme that still utilizes the parent theme's styles and functionality but adds a different layout, in this example, a page template that removes the sidebar [9].

There is no design error here. The style was purposefully created in this manner to make it simple for users to add or remove a right sidebar from their websites. While I prefer to utilise the right sidebar, there are times when I need to have a full-wide being used so that I may add material that benefits from full width, such as a forum or a video. Just add a new wordpress theme and the

required styling to the style.css file to add this functionality to your child theme. Copying an existing template and making the necessary changes to it is an effective technique to develop a new theme page template. In this situation, a decent place to start is by copying the parent theme's page.php file to a new page-full.php file. Following some adjustments, the page-full.php file appears as follows:

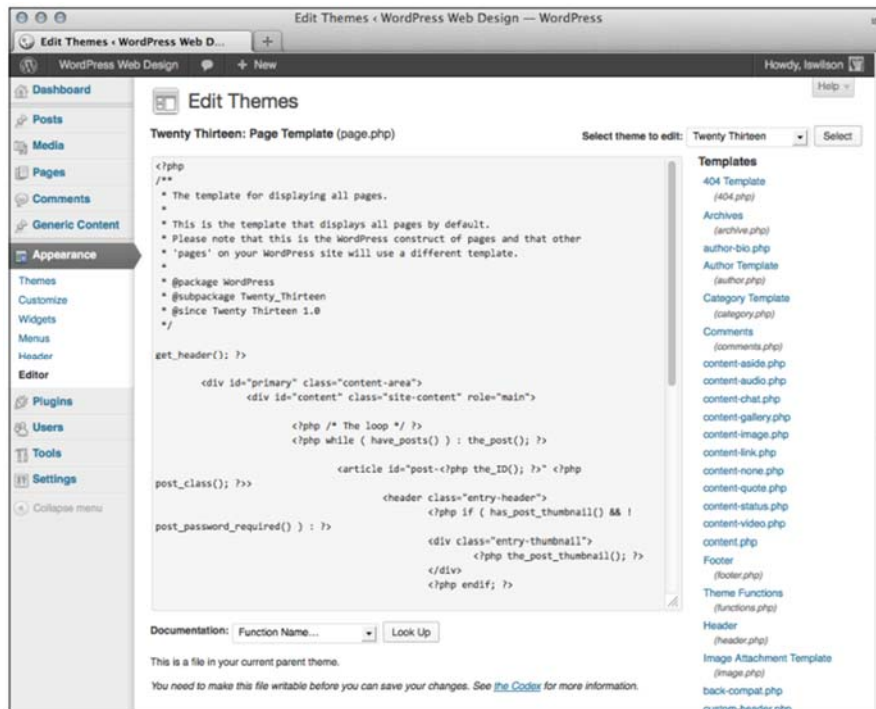


Figure 8: Illustrated the default page template in Twenty Thirteen.

```
<?php
/**
 * Template Name: Full Width
 * The template for displaying full width.
 */
get_header(); ?>
<div id="primary" class="content-area">
<div id="content" class="site-content" role="main">
<?php /* The loop */ ?>
<?php while ( have_posts() ) : the_post(); ?>
<article id="post-<?php the_ID(); ?>" <?php post_class(); ?>>
<header class="entry-header">
<?php if ( has_post_thumbnail() && ! post_password_required() ) : ?>
<div class="entry-thumbnail">
<?php the_post_thumbnail(); ?>
</div>
<?php endif; ?>
<h1 class="entry-title"><?php the_title(); ?></h1>
</header><!-- .entry-header -->
```

```

<div class="entry-content">
<?php the_content(); ?>
<?php wp_link_pages( array( 'before' => '<div class="page-links"><span
class="page-links-title">' . __( 'Pages:', 'twentythirteen' ) .
'</span>', 'after' => '</div>', 'link_before' => '<span>', 'link_
after' => '</span>' ) ); ?>
</div><!-- .entry-content -->
<footer class="entry-meta">
<?php edit_post_link( __( 'Edit', 'twentythirteen' ), '<span class="editlink">', '</span>' );
?>
</footer><!-- .entry-meta -->
</article><!-- #post -->
<?php comments_template(); ?>
<?php endwhile; ?>
</div><!-- #content -->
</div><!-- #primary -->
<?php get_footer(); ?>

```

The main change is the removal of the `get_sidebar();` code, which prevents the sidebar widgets from being called when this website template is applied to a web page. To make sure that the material of the full-width page covers the width of the site, you must make a tiny stylistic adjustment in the child theme stylesheet. I can see that the following lines in the parent CSS provide the content area width:

```

.sidebar .entry-header,
.sidebar .entry-content,
.sidebar .entry-summary,
.sidebar .entry-meta {
  max-width: 1040px;
  padding: 0 376px 0 60px;
}

```

The right-side padding inside this style is designated at 376px by the padding. In order for the content to cover more of the right side of the desktop browser, you must decrease the right-side padding. Just add the following lines in the child theme's style after the `@import` rule. right side spacing to be reduced to 60px using a CSS file [10].

```

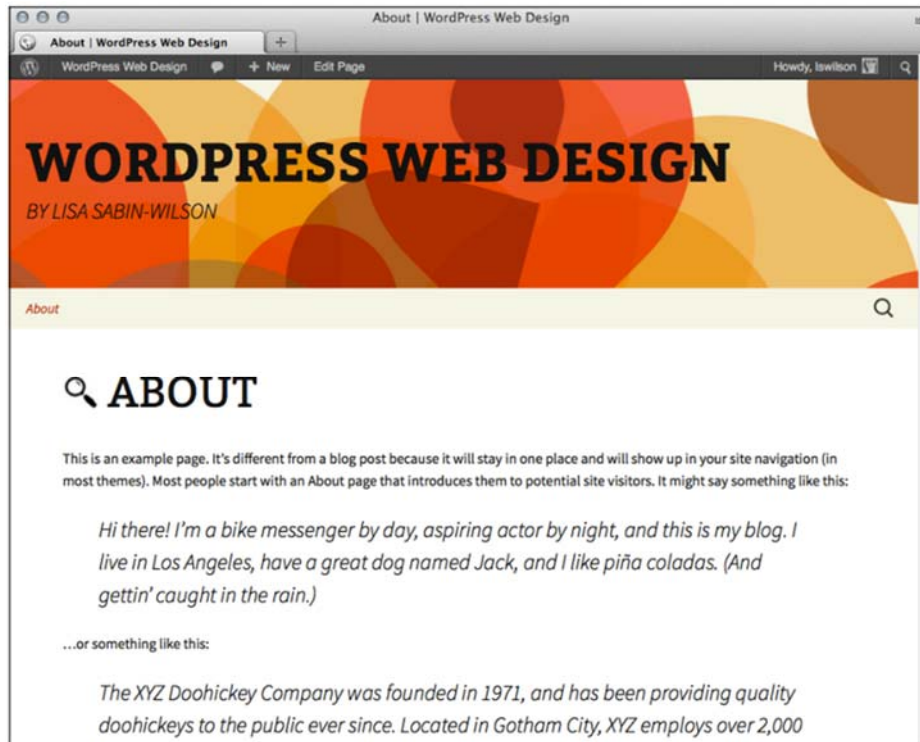
.sidebar .entry-header,
.sidebar .entry-content,
.sidebar .entry-summary,
.sidebar .entry-meta {
  max-width: 1040px;
  padding: 0 60px 0 60px;
}

```

Switching to the Full Width page template produces the layout shown in Figure 9.

## Removing template files

You may be asking why you would want to delete the template file for a parent. Sadly, there isn't a compelling reason to do this with the Twenty Thirteen theme. So that you can comprehend how to remove a file from the primary theme in the future, use your thoughts a little bit here. Consider that you are developing a kid theme based on the parent theme Example Parent. Example: The parent theme is beautifully made, and the child theme appears and functions just as you want it to, but there is an issue. The home.php template file included with the Example Caregiver theme offers a fully customizable page template for usage as your site's home page. This works well, however should you desire a typical blog home page for the site, you shouldn't use it. Everything would function flawlessly in Example Parent if the home.php file didn't exist.



**Figure 9: Illustrated the Full Width, No Sidebar page template.**

Without changing the parent theme, you can't get rid of the home.php file from Example Parent; you'll need to employ a technique. Replace the file with an imitation of index.php instead than deleting it. You could believe that the best course of action would be to simply copy and paste the Example Parent index.php code into the child theme's home.php file. Nevertheless, I have a better solution. You may instruct WordPress to execute the index.php file in order to ensure that modifications to index.php are honoured. You just need to change one line of code in the child theme's home.php file to switch from home.php to index.php:

```
<?php locate_template( array( 'index.php' ), true ); ?>
```

Using magic, the locate template method does some work. It is utilised if the child theme includes an index.php file. If not, the index.php file from the parent is utilized. This achieves the same outcome as deleting the home.php file from the parent theme. The modifications to index.php are respected, and the home.php code is disregarded.

## Modifying the theme functions file

Theme functions files, often known as functions.php files, may be provided by child themes much like template files. The functions.php file of a WordPress theme does not overwrite the file of something like the parent theme, unlike template files. WordPress executes both the parent and the child theme's functions.php files concurrently when a parent theme and a child theme both contain a functions.php file. The functions.php file of the parent theme runs second after that of the child theme. This is done on purpose so that the child theme may override the functions listed in the functions.php file of the parent theme. This only operates, however, if the functions are configured to support it. A function named twenty thirteen setup is defined in the Twenty Thirteen functions.php file. This access points the setting up of several theme choices and turns on certain extra features. To alter the theme's default settings and capabilities, child themes may take the place of this function. The functions.php file enables this by doing the following, as seen in the following lines of code:

### **function twentythirteen\_setup()**

The site won't crash if the function definition is enclosed in an if statement, and a child theme may create its own implementation of the function as well. You can see how changing this function impacts the theme in the TwentyThirteen Child theme. The functions.php file for the TwentyThirteen Wordpress theme should be updated to include a new twentythirteen setup function that supports post thumbnails:

```
<?php
function twentythirteen_setup() {
add_theme_support( 'post-thumbnails' );
}
```

As a consequence of this modification, the child theme no longer controls additional unique WordPress features like location and internationalisation, automated feed link creation, custom editor style, and so forth. The lesson from this example is that a child theme can only offer a customised version of a function if the parent theme surrounds the function expression in an if block that performs a function check first.

## Preparing a Parent Theme

WordPress makes creating parent themes simple for theme creators. WordPress handles the majority of the labor-intensive work, but in order for a parent theme to perform effectively, a theme developer must adhere to certain standards. The words "stylesheet" and "template" have been used a lot and in a variety of ways. Generally, stylesheet refers to a theme's CSS file while template refers to the theme's template file. But, when dealing with parent and child issues, these phrases also have distinct connotations. When using parent and child themes, you must be aware of the distinction between a stylesheet and a template. The stylesheet is the parent theme of the current theme in WordPress, while the template is the active theme. The active theme is the stylesheet and the template if the theme lacks a parent.

At first, child themes could only change a theme's style.css file. The functions.php code and all of the template files were given by the parent. As a result, the parent theme supplied the template files, while the child theme offered the styling and design. Future WordPress versions increased

the functionality of child themes, making it a little unclear how to use the phrases "parent" and "child" themes [11].

Imagine two themes: parent and child. The following code is in the parent theme's header.php file and loads an additional stylesheet provided by the theme:

```
<link type="text/css" rel="stylesheet" media="all" href="<?php
bloginfo('stylesheet_directory') ?>/reset.css" />
```

The `blog_info()` function prints information about the site configuration or settings. This example uses the function to print the URL location of the stylesheet directory. The site is hosted at `http://example.com`, and the parent is the active theme. The preceding code produces the following output:

```
<link type="text/css" rel="stylesheet" media="all"
href="http://example.com/wp-content/themes/Parent/reset.css" />
```

If the child theme is activated, the output is

```
<link type="text/css" rel="stylesheet" media="all"
href="http://example.com/wp-content/themes/Child/reset.css" />
```

The location now refers to the `reset.css` file in the child theme. This can work if every child theme copies the `reset.css` file of the parent theme, but requiring child themes to add files to function isn't good design. The solution is simple: Rather than using the `stylesheet_directory()` in the `bloginfo()` call earlier, use `template_directory()`. The code looks like this:

```
<link type="text/css" rel="stylesheet" media="all" href="<?php
bloginfo('template_directory') ?>/reset.css" />
```

Now, all child themes properly load the parent `reset.css` file. When developing, use `template_directory` in stand-alone parent themes and use `stylesheet_directory` in child themes.

## REFERENCES

- [1] K. A. Chu, C. Schwartz, E. Towner, N. A. Kasparian, and B. Callaghan, "Parenting under pressure: A mixed-methods investigation of the impact of COVID-19 on family life," *J. Affect. Disord. Reports*, 2021, doi: 10.1016/j.jadr.2021.100161.
- [2] E. J. Kiel and A. E. Kalomiris, "Current themes in understanding children's emotion regulation as developing from within the parent-child relationship," *Current Opinion in Psychology*. 2015. doi: 10.1016/j.copsyc.2015.01.006.
- [3] R. Khara, L. R. Kalankesh, H. Shahrokhi, S. Dastgiri, K. Gholipour, and M. R. Feizi-Derakhshi, "Identifying the needs of families of children with autism spectrum disorder from specialists and parents' perspectives: A qualitative study," *Iranian Journal of Psychiatry and Behavioral Sciences*. 2021. doi: 10.5812/ijpbs.107203.



- [4] R. L. Woodgate, M. Edwards, J. D. Ripat, B. Borton, and G. Rempel, "Intense parenting: A qualitative study detailing the experiences of parenting children with complex care needs," *BMC Pediatr.*, 2015, doi: 10.1186/s12887-015-0514-5.
- [5] M. A. C. P. de Man *et al.*, "Parental experiences of their infant's hospital admission undergoing cardiac surgery: A systematic review," *Acta Paediatrica, International Journal of Paediatrics*. 2021. doi: 10.1111/apa.15694.
- [6] K. Boshoff, D. Gibbs, R. L. Phillips, L. Wiles, and L. Porter, "A meta-synthesis of how parents of children with autism describe their experience of advocating for their children during the process of diagnosis," *Health and Social Care in the Community*. 2019. doi: 10.1111/hsc.12691.
- [7] A. Brigden, A. Shaw, E. Anderson, and E. Crawley, "Chronic fatigue syndrome/myalgic encephalomyelitis in children aged 5 to 11 years: A qualitative study," *Clin. Child Psychol. Psychiatry*, 2021, doi: 10.1177/1359104520964528.
- [8] D. S. Zhukovsky, C. L. Rozmus, R. Robert, E. Bruera, R. J. Wells, and M. Z. Cohen, "Symptom and illness experience for English and Spanish-speaking children with advanced cancer: Child and parent perspective," *Children*, 2021, doi: 10.3390/children8080657.
- [9] D. M. Steinberg, J. A. Andresen, D. A. Pahl, M. Licursi, and S. L. Rosenthal, "I've Weathered Really Horrible Storms Long Before This...': The Experiences of Parents Caring for Children with Hematological and Oncological Conditions during the Early Months of the COVID-19 Pandemic in the U.S.," *J. Clin. Psychol. Med. Settings*, 2021, doi: 10.1007/s10880-020-09760-2.
- [10] T. J. Cheetham-Blake, H. E. Family, and J. M. Turner-Cobb, "'Every day I worry about something': A qualitative exploration of children's experiences of stress and coping," *Br. J. Health Psychol.*, 2019, doi: 10.1111/bjhp.12387.
- [11] J. Davies, M. O'Connor, G. K. B. Halkett, L. Kelada, and N. G. Gottardo, "Parents' Experiences of Childhood Cancer during the COVID-19 Pandemic: An Australian Perspective," *J. Pediatr. Psychol.*, 2022, doi: 10.1093/jpepsy/jsab125.



## CHAPTER 17

### BUILDING YOUR CUSTOM WEBSITE

#### USING BASIC CSS AND HTML TO CUSTOMIZE YOUR SITE DESIGN

---

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The process of making minor changes to an existing WordPress theme is known as tweaking. Several WordPress website owners often modify their pre-existing themes. This chapter details some of the most popular theme adjustments you may make, such as altering the header picture, the background colour or text link colours, and font styles. These adjustments are also rather simple to do. In no time at all, you'll be making changes to your own theme. You will learn the fundamentals of CSS and HTML markup in this chapter, which you will use to give your WordPress theme structure and design. Along with the functions and template elements, CSS style and HTML markup provide your website the final touches for an aesthetically pleasant design and format [1].

Make a backup of current theme so that you have the original image from which you can quickly restore it if necessary before you start fiddling with templates excessively. By establishing an FTP connection to your web server and download your theme folder to your computer, you may make a backup of your theme files. Feel free to modify away after you have the original theme files saved safely on your hard drive, confident in the knowledge that you've made a backup.

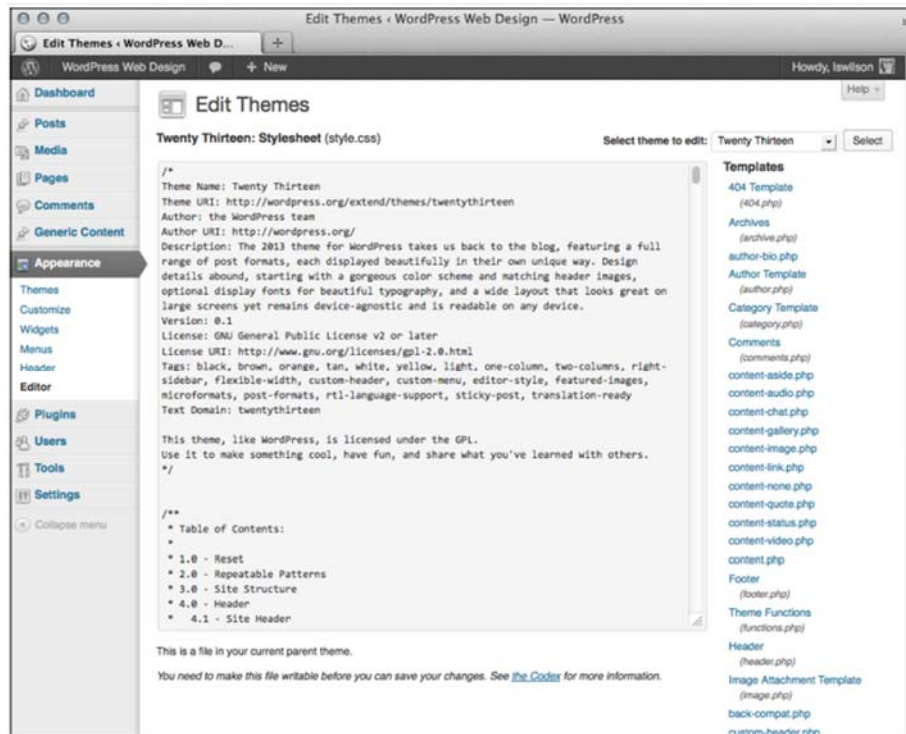
#### **Styling with CSS: The Basics**

You may customise the style sheet for your theme by being familiar with some basic Cascading Style Sheets (CSS) ideas. Simply said, CSS is a collection of instructions that let you alter the appearance and feel of your HTML code. Selectors, IDs and classes, properties and values, and other frequently used commands and tools are covered in this article. These commands may be used in combination to change HTML so that it displays your own designs. In the section "Understanding Basic HTML Methods to Employ on Your Site," which is later in this chapter, you may read more about HTML.

#### **Introducing CSS**

A stylesheet called a Cascading Style Sheet governs how material on a website appears. CSS is used by any WordPress theme you use on your website. The template components in your templates get some style and design flare thanks to CSS. The style.css file is used to import the CSS for your WordPress theme using the header template (header.php). For the Modify Themes page to appear, choose Appearance Editor from your Dashboard. To access the Header template, locate the link on the far right side of the page under the name "Templates" and click it. The next line of code inserts the style.css (CSS) file into the page to provide formatting for the site's components [2]:

```
<link rel="stylesheet" type="text/css" media="all" href="<?php bloginfo('stylesheet_url'); ?>" />
```



**Figure 1: Illustrated the WordPress default Twenty Thirteen theme stylesheet, style.css.**

CSS won't function for your website if you change the line of code that imports the style.css file. You may go through your theme's stylesheet on the Modify Themes page. The primary stylesheet (style.css) for your theme is automatically shown when you first view this page, as seen in the above picture. If not, go down to the Styles section beneath the Templates heading on the page's right and click the Stylesheet link to open the style.css file. You may add distinctive styling, such as fonts, sizes, and colours to headlines, text, links, and borders, as well as modify the space between them, by making CSS adjustments to your theme's stylesheet. With all the CSS choices available, you can easily alter the appearance and feel of various components. Applying modifications to the stylesheet or any other part of the theme file may result in incorrect theme loading on your website. Be cautious while making changes here. To avoid permanently changing a live or critical site, make sure you're working on a playground or playground site so you can simply restore your original file. (For more on creating a sandbox environment, see Chapter 8). Moreover, I advise making a duplicate of the original stylesheet in a text editor like Notepad (Windows) or Text Mate (Mac) so that you can locate it and paste it over into your stylesheet if necessary [3], [4].

## CSS Selectors

Using CSS, you can control how components on your website are displayed, including text links, header pictures, font size and colour, paragraph margins, and line spacing. Names, properties, and values are included in CSS selectors to specify which HTML elements in the templates you'll use CSS to style. Examples of CSS selectors and their use are shown in Table 1.

## Classes and IDs

Under the Change Themes tab of your Dashboard, you'll find the stylesheet (style.css) for the Twenty Thirteen theme by default. While everything in it may now seem alien to you, I want to draw your attention to two things you may notice as you scroll down the template:

**#container:** This is one type of CSS selector. The hash mark (#) indicates that it's a CSS ID and can be used only once per page.

**Table 1: Illustrated the Basic CSS Selectors**

Sr. No.	CSS Selector	Description	HTML	CSS
1.	body	Sets the style for the overall body of the site, such as the background color and default fonts.	<body>	Body {background-color: white} The background color on all pages is white.
2.	p	Defines how paragraphs are formatted.	<p>This is a paragraph</p>	p {color:black} The color of the fonts used in all paragraphs is black.
3.	h1, h2, h3, h4	Provides bold headers for different sections of your site.	<h1>This is a site title</h1>	h1 {font-weight: bold;} The fonts surrounded by the ... HTML tags will be bold.
4.	a	Defines how text links appear in your site.	<a href="http://wiley.com">Wiley</a>	a {color: red} All text links appear in red.

**One column:** This is another type of CSS selector. The period (.) indicates that it's a CSS class and can be used multiple times on a page to automate changes that are made more than once.

Several areas of your WordPress theme are styled differently according to their IDs and classes. Examples of IDs and classes from the Twenty Thirteen WordPress theme's header.php template

are shown in Table 2. With this knowledge in hand, you are aware of where to search in the stylesheet to update the styling for a specific region of your theme [5].

**Table 2: Illustrated the Using Basic CSS and HTML to Customize Your Site Design**

HTML	CSS Selector	Description
<code>&lt;div id="wrapper"&gt;</code>	<code>#wrapper</code>	Styles the elements for the wrapper ID in your template(s)
<code>&lt;div id="header"&gt;</code>	<code>#header</code>	Styles the elements for the header ID in your template(s)
<code>&lt;div id="masthead"&gt;</code>	<code>#masthead</code>	Styles the elements for the masthead ID in your template(s)
<code>&lt;h1 id="site-title"&gt;</code>	<code>#site-title</code>	Styles the elements for your site-title ID in your template(s), but also follows rules for the h1 values set in the CSS
<code>&lt;div id="site-description"&gt;</code>	<code>#site-description</code>	Styles the elements for your site-description ID in your template(s)
<code>&lt;div class="skip-link screen-reader-text"&gt;</code>	<code>.skip-link</code> and <code>.screen-reader</code>	Styles the elements for your skip-link and screen-reader classes in your template(s)

If you find an element in the template code that says id (such as `div id=` or `p id=`), look for the hash symbol in the stylesheet. If you find an element in the template code that says class (such as `div class=` or `p class=`), look for the period in the stylesheet followed by the selector name.

### CSS properties and values

CSS properties are assigned to the CSS selector name. You also need to provide values for the CSS properties to define the style elements for the particular CSS selector you're working with.

In the default Twenty Thirteen WordPress theme, for example, the first piece of markup in the Header template (`header.php`) is. This ID, with the name `wrapper`, provides styling for the site page [6]. In the default Twenty Thirteen WordPress theme stylesheet, the CSS defined for the site class is as follows:

```
.site {
background-color: #fff;
border-left: 1px solid #f2f2f2;
border-right: 1px solid #f2f2f2;
margin: 0 auto;
max-width: 1600px;
width: 100%;
}
```

Every CSS property needs to be followed by a colon (:), and each CSS value needs to be followed by a semicolon (;). The CSS selector is .site, which has six properties:

- a. The first CSS property is background-color, which has the value of #fff (or white).
- b. The second CSS property is border-left, which has the value 1px solid #f2f2f2 (a light gray border that is 1 pixel in width).
- c. The third CSS property is border-right, which has the value 1px solid #f2f2f2 (a light gray border that is 1 pixel in width).
- d. The fourth CSS property is margin, which has the value 0 auto.
- e. The fifth CSS property is max-width, which has the value of 1600px (the maximum width).
- f. The sixth, and final, CSS property is width, which has the value 100% (uses 100% of the available width of the browser window).

Table 3 provides some examples of commonly used CSS properties and values:

**Table 3: Represented the different CSS Property and its values.**

CSS Property	CSS Value	Examples
Background-color	Defines the color of the background (such as red, black, or white)	Markup: <div class="site"> CSS: .site {background-color: white}
background	Defines a background image and/ or color	Markup: <header> CSS: header {background:url(images/header.jpg) no-repeat;}
Font-family*	Defines the fonts used for the selector	Markup: CSS: body {font-family: 'Lucida Grande', Verdana, Arial, Sans-Serif;}
color	Defines the color of the text	Markup: <h1>Website Title</h1> CSS: h1 {color: blue}
font-size**	Defines the size of the text	Markup: <h1>Website Title</h1> CSS: h1 {font-size: 18px;}
text-align	Defines the alignment of the text (left, center, right, or justified)	Markup: <div class="site">...</div> CSS: .site {text-align: left;}

## Changing the Background Image or Color Used in Your Theme

I'll demonstrate how to include a customized backdrop feature into your main topic in the parts that follow to enable the ability to quickly change the background colour or picture from the Dashboard. Alternately, you may update the background color or graphics of your website by using the element in a Header template [7].

### Adding the custom background feature to a theme

The Twenty Thirteen WordPress theme does not come with a feature that lets you use an image or alter the background color of your site using a tool that is available in WordPress. But, you may add a useful feature to your WordPress functions.php file that will enable your theme to implement the custom background feature, allowing you to alter the background picture and/or color for your website [8].

You can add the custom background feature to any theme with just one line of code. Follow these steps:

1. From the Dashboard, choose Appearance ⇌ Editor.
2. Click the Theme Functions (functions.php) template on the right side of the page.
3. Add the following line of code to the Theme Functions template before the closing `?>` tag:

```
add_custom_background();
```

This line of code tells WordPress that your theme has added the custom background feature.

4. Click the Save File button.

The Theme Functions template is saved, along with your changes. The Background link now appears below the Appearance menu on your Dashboard.

### Customizing the background

Any theme that has the custom background feature allows you to change the background to a different color or use an image for it. To change the background for your website, follow these steps:

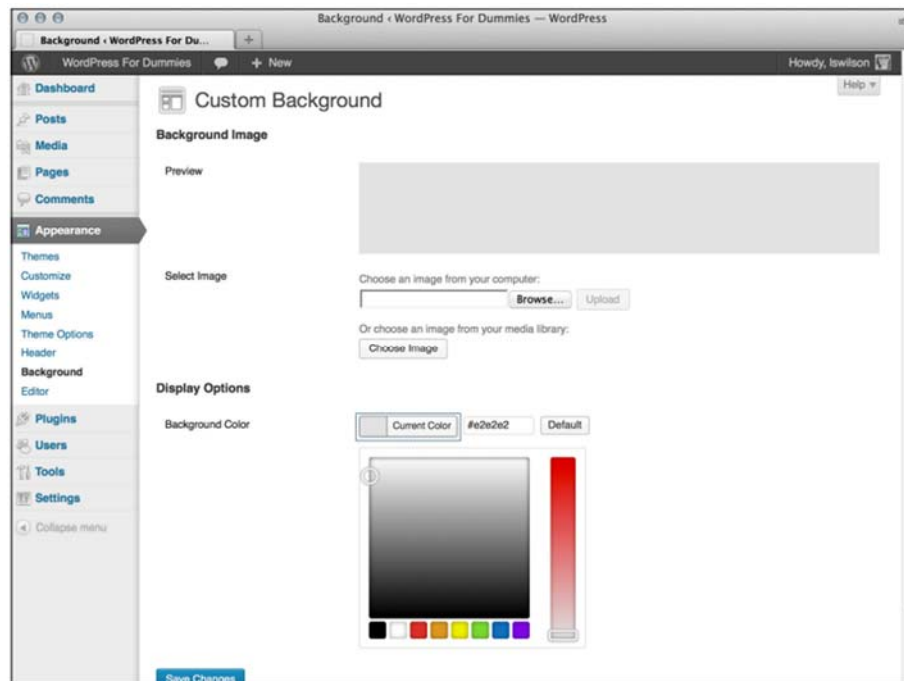
1. **Choose Appearance ⇌ Background.**

The Custom Background page loads on the Dashboard. By default, the background color is set to white.

2. **(a). To change the background color, click the Select Color button and then type the hexadecimal color code in the Color text box and then skip to Step 4.**

If you don't know what hex code you want to use, click the Select a Color button and then, in the color selector that appears, click a color, as shown in Figure 2. Note that when you click the Select Color button, the text changes to Current Color.) A hexadecimal (or hex) code represents a certain color. Hex codes always start with a hash symbol (#) and have six letters and/or numbers to represent a particular color, such as #d5d6d7 (light gray).

**Figure 2: Illustrated the color selector on the Custom Background page.**



**(b)** To use an image file for the background, upload an image from your computer:

Click the Browse button in the Select Image section and then select a file from your computer.

Click the Upload button. The Custom Background page refreshes and gives you several display options.

### 3. Change the display options for your new background image:

**Position:** Select Left, Center, or Right to set the screen position of the background image on your website.

**Repeat:** Choose No Repeat, Tile, Tile Horizontally, or Tile Vertically in this drop-down list to set the image on your website.

**Attachment:** Select Scroll to set the background image to scroll down the page, or select Fixed to set the background image in a static position so that it doesn't scroll down the page.

### 4. Click the Save Changes button.

Be sure to click the Save Changes button before navigating away from the Custom Background page; otherwise, your new settings aren't saved [9].

Because all themes are not created equal, themes that don't have the custom header and background features enabled make it a little more challenging to change these elements. Without these features, you have to make tweaks via the theme CSS (style.css), covered in the next section.



## Changing the background using CSS

The `<body>` tag is simple HTML markup. Every theme has this tag, which defines the overall default content for each page of your website the site's body.

In the stylesheet (style.css), the background for the body is defined like this:

```
body {background: #f1f1f1;}
```

The background for the `<body>` tag uses a hexadecimal color code of `#f1f1f1`, which gives the background a light gray color. You can use a color or an image to style the background of your website. You can also use a combination of colors and images in your backgrounds.

## Using an image as the site's background

You can easily use an image as a background for your site by uploading the image to the images folder in your theme directory. That value looks like this [10]:

```
background: url(images/yourimage.jpg)
```

The url portion of this code automatically pulls in the URL of your site, so you don't have to change the url part to your URL.

## Changing the background color

If you want to change the background color of your theme, follow these steps:

1. On the WordPress Dashboard, choose Appearance ⇄ Editor.

The Edit Themes page opens.

2. From the Select Theme to Edit drop-down list, choose the theme you want to change.
3. Click the Stylesheet link in the list of templates.

The style.css template opens in the text editor in the middle of the Edit Themes page.

4. Scroll down in the text editor until you find the CSS selector body.

If you're tweaking the default theme, this section is what you're looking for:

```
body { background: #f1f1f1;}
```

If you're tweaking a different template, the CSS selector `body` looks similar.

5. Edit the background property's values.

For example, in the default template, if you want to change the background color to black, you can enter either

```
background: #000000;
```

or

```
background: black;
```

In the case of some basic colors, you don't have to use the hex code. For colors like white, black, red, blue, and silver, you can just use their names `background: black`, for example.

6. Click the Update File button near the bottom of the page.

Your changes are saved and applied to your theme.

7. Visit your site in your web browser.

The background color of your theme has changed.

## Defining and Positioning Your Header Image with CSS

Most themes have a header image that appears at the top of the page. This image is generated by a graphic defined either in the CSS value for the property that represents the header area or through the use of a custom header feature in WordPress.

### Defining a background image to use as a header

As I explain in Chapter 10, adding a custom header picture to a website using the Twenty Thirteen theme is really simple with the WordPress default theme. The difficult job has been completed for you. You may simply specify a background picture for the header image using CSS in themes without the custom header image capability. The HTML markup for the header of the template is as follows for the sake of this example:

```
<div id="header"></div>
```

In the CSS (`style.css`) file, you can use a background image by defining it in the CSS properties for `#header`. Use this code:

```
#header {  
background: url(/images/header-image.jpg) no-repeat;  
width: 980px;  
height: 100px;  
}
```

A header-image.jpg image is indicated by the background value. You must make the picture and download it to your central server in the /images/ directory in order for it to show up on your website. I advise utilising the GIF, JPG, or PNG image formats for creating images for the internet. GIF format works well for pictures with few colours, such as charts, drawing tools, logos, and so on. Use JPG or PNG for various picture kinds (screenshots with text and images, blended transparency, etc.) [11], [12].

### Positioning, repeating, or scrolling your background image

After uploading a graphic for your theme, you may position it using CSS background properties. You may accomplish the required effect by using the key CSS attributes background-position, background-repeat, and background-attachment. The CSS background attributes are included in Table 4 along with the values that may be used to modify them in your theme stylesheet.

**Table 4: Illustrated the Using Basic CSS and HTML to Customize Your Site Design**

Property	Description	Values	Example
Background-position	Determines the starting point of your background image on your web page	bottom center bottom right left center right center center center	Background-position: bottom center;
Background-repeat	Determines whether your background image will repeat or tile	repeat (repeats infinitely)  repeat-y (repeats vertically)  repeat-x (repeats horizontally)  no-repeat (does not repeat)	Background-repeat: repeat-y;
Background-attachment	Determines whether your background image is fixed or scrolls with the browser window	fixed scroll	Background-attachment: scroll;

The code sample uploads a brand-new background picture with the filename header-image.jpg in the earlier part. You may tinker with this graphic's location by using some of the characteristics shown in Table 4. Like me, you may like experimenting with different settings to see how they affect your website. Suppose your objective is to tile, or duplicate, the background picture over the width of something like the browser on any machine, or across the screen from left to right. Also, you wish to alter the background's color (like white, as in the following sample). To do this, reopen the CSS and modify:

**background: #f1f1f1;**

to

**background: #FFFFFF;**  
**background-image: url(images/header-image.jpg);**  
**background-repeat: repeat-x;**

or you can use

**background: #FFFFFF url(images/header-image.jpg) repeat-x;**

## REFERENCES

- [1] D. Rubio, Beginning Django. 2017. doi: 10.1007/978-1-4842-2787-9.
- [2] D. Rubio, Beginning Django: Web Application Development and Deployment with Python. 2017.
- [3] N. George, Beginning django CMS. 2015. doi: 10.1007/978-1-4842-1669-9.
- [4] E. Tiggeler, Joomla! 2.5 Beginner's Guide. 2012.
- [5] C. Lindley, "jQuery Cookbook: Solutions & Examples for jQuery Developers, 1st edition," O'Reilly Media, Inc. , 2009.
- [6] "Joomla!: a user's guide: building a successful Joomla! powered Website," Choice Rev. Online, 2009, doi: 10.5860/choice.46-2717.
- [7] M. Peacock, "PHP 5 Social Networking," Pack Publishing. United Kingdom, 2010.
- [8] "The economy of you: discover your inner entrepreneur and recession-proof your life," Choice Rev. Online, 2015, doi: 10.5860/choice.184855.
- [9] J. Faircloth, "Client-side attacks and human weaknesses," in Penetration Tester's Open Source Toolkit, 2011. doi: 10.1016/b978-1-59749-627-8.10004-2.
- [10] Anonymous, "e-gallery," Tech Dir., 2006.
- [11] S. Konkiel, "15 types of data to collect when assessing your digital library," Altmetric blog, 2016.
- [12] J. Ouellette and Salesforce.com, Development with the Force.com platform: building business applications in the cloud. 2012.

## CHAPTER 18

### CHANGING BASIC ELEMENTS TO CREATE A UNIQUE LOOK FOR YOUR SITE

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As you comprehend the fundamentals of customizing your website using images and CSS, you start to realize how simple it is to alter the appearance and feel of your website using these tools. The following sections go through a couple of my favorite techniques for coming up with an intriguing design presentation or a distinctive and artistic appearance.

#### Adding background colors and image effects

I gave you a few examples earlier in this chapter of how you may alter your header graphic's image and/or background colour, as well as your background colours and image, by modifying the CSS and HTML. Your website's mood may be radically altered by changing the background picture. But you may also utilise pictures and background colours for other parts of your theme [1].

Background techniques include using solid colors and repeating gradients or patterns to achieve a subtle yet polished effect.

Use colors that accent the colors of your logo and don't hamper text readability.

You can add CSS background colors and image effects to the following areas of your theme:

- a. Post and page content sections
- b. Sidebar widgets
- c. Comment blocks
- d. The footer area

#### Choosing a font family, color, and size

The typefaces in your theme may be changed for stylistic or readability reasons. I've seen specialists in typographic (or type) design employ simple font modifications to get stunning design outcomes. To be less distracting, you may utilise typefaces to divide headlines from body of the text or widget headlines but also text from the main content. Table 1 provides some examples of frequently used font attributes [2].

**Table 1: Represented the Some CSS font's style.**

Font Properties	Common Values	CSS Examples
font-family	Georgia, Times, serif	body {font-family: Georgia; serif;}
font-size	px, %, em	body {font-size: 14px;}

font-style	italic, underline	body {font-style: italic;}
font-weight	bold, bolder, normal	body {font-weight: normal}

## Font family

The web is really rather particular about font display and the kind of fonts that may be used in the font-family attribute. On the internet, not all typefaces display properly. For your protection, here are a few popular font families that work with most browsers:

**Serif fonts:** Times New Roman, Georgia, Garamond, and Bookman Old Style

**Sans-serif fonts:** Verdana, Arial, Tahoma, and Trebuchet MS

Serif fonts have little tails, or curlicues, at the edges of letters. This text is in a serif font. Sans-serif fonts have straight edges and are devoid of any fancy styling [3].

When you want to change a font family in your CSS, open the stylesheet (style.css), search for property: font-family, change the values for that property, and save your changes.

In the default template CSS, the font is defined in the tag like this:

**Font-family: Georgia, “Bitstream Charter”, serif;**

## Font color

You may choose the ideal colour for your project from more than 16 million different HTML colour combinations. You'll eventually commit your preferred colour codes to memory. Knowing the codes for various greyscales enables me to swiftly apply a finishing touch to a design. As an example, I often utilise the greyscales in Table 2 for backgrounds, design element borders, and widget headers.

**Table 2: Illustrated the My Favorite CSS Colors**

Color	Value
<b>White</b>	#FFFFFF or #FFF
<b>Black</b>	#000000 or #000
<b>Gayes</b>	#CCCCCC or #CCC #DDDDDD or #DDD #333333 or #333 #E0E0E0

By adjusting the color parameter of the CSS selector, you wish to modify, you may quickly change the font's color. Hex codes may be used to specify colors. By specifying it in the body CSS selector as shown below, you may specify the general font colour for your website: [4].

**body { color: #333; }**

## Font size

To tweak the size of your font, change the font-size property of the CSS selector you want to adjust. Font sizes are generally determined by units of measurement, as in these examples:

- i. **px:** Pixel measurement, or px; increasing or decreasing the number of pixels increases or decreases the font size (12px is larger than 10px).
- ii. **pt:** Point measurement, or pt; as with pixels, increasing or decreasing the number of points affects the font size accordingly (12pt is larger than 10pt).
- iii. **%:** Percentage measurement, or %; increasing or decreasing the percentage number affects the font size accordingly (50% is equivalent to 8 pixels; 100% is equivalent to 16 pixels).

In the default template CSS, the font size is defined in the body tag in pixels, like this [5]:

**font-size: 12px;**

### Putting it all together

Style the font for the overall body of your site by putting all three elements (font-family, color, and font-size) together in the tag. Here's how they work together in the tag of the default template CSS:

**body { font-size: 12px; font-family: Georgia, "Bitstream Charter", serif; color: #666; }**

### Using borders in your design

CSS borders can add an interesting and unique flair to elements of your theme design. Table 3 illustrates common properties and CSS examples for borders in your theme design. You can save lots of room by using the border shorthand in your CSS that defines the border size, style, and color all in one line, such as border: 1px solid #CCCCCC [6], [7].

**Table 3: Illustrated the Common Border Properties**

<b>Border Properties</b>	<b>Common Values</b>	<b>CSS Examples</b>
border-size	px, em	body {border-size: 1px;}
border-style	solid, dotted, dashed	body {border-style: solid}
border-color	Hexadecimal values	body {border-color: #CCCCCC}

### Understanding Basic HTML Techniques to Use on Your Site

HTML can help you customize and organize your theme. To understand how HTML and CSS work together, think of it this way: If a website were a building, HTML would be the structure (the studs and foundation), and CSS would be the paint.

HTML contains the elements that CSS provides the styles for. All you have to do to apply a CSS style is use the right HTML element. Here is a very basic block of HTML that I can break down for this example:



```

<body>
<div id="content">
<h1>Headline Goes Here</h1>
<p>This is a sample sentence of body text. <blockquote>The journey of a thousand
miles starts with the first step.</blockquote> I'm going to
continue on this sentence and end it here. </p>
<p>Click <a href="http://lisasabin-wilson.com">here</a> to visit my website.</p>
</div>
</body>

```

All HTML elements must have opening and closing tags. Opening tags are contained in less-than (<) symbols. Closing tags are the same, except they're preceded by a forward slash (/). For example:

```
<h1>Headline Goes Here</h1>
```

Note that the HTML elements must be properly nested. In line four of the previous example, a paragraph tag is opened (<p>). Later in that line, a block quote is opened (<blockquote>) and nested inside the paragraph tag. When editing this line, you can't end the paragraph (/p) before you end the block quote (</blockquote>). Nested elements must close before the elements they're nested within close.

Finally, proper tabbing, or indenting, is important when writing HTML, mainly for readability so you can quickly scan through code to find what you're looking for. A good rule is that if you didn't close a tag in the line above, indent one tab over. This allows you to see where each element begins and ends. Tabbing can also be very helpful when diagnosing problems.

You'll use several very basic HTML markup practices over and over in web design. Earlier in this chapter, I discuss how to combine CSS styling with HTML markup to create different display styles (borders, fonts, and so on). The following sections provide you with commonly used HTML markup samples that are helpful as a reference for using HTML in your website code [8].

## Inserting images

Many times, you'll want to insert an image in your website, whether within the body of a post or page, in the sidebar by using a widget, or within the template code itself. The HTML markup to insert an image looks like this:

```

```

I break down this code for you in easy snippets to help you understand what is at work here:

- a. **<img src=**: This is the HTML markup that tells the browser that the website is looking for an image file.
- b. **"/path/to/image-file.jpg"**: This is the actual directory path where the web browser can find the image file. For example, if you upload an image to your web server in the /wp-content/uploads directory, the path for that image file would be /wp-content/uploads/image-file.jpg.

- c. **alt="Image File Name"**: The alt tag is part of the HTML markup and provides a description for the image that search engines can pick up and recognize as keywords. The alt tag description will also appear as text on browsers that can't, for some reason, load the image file. For example, if the server load time is slow, the text description loads first to at least provide visitors with a description of what the image is.
- d. **/>**: This HTML markup tag closes the initial `Wiley</a>
```

To break down that markup, here's a simple explanation:

- a. **<a href=**: This is the HTML markup that tells the browser that the text within this tag should be hyperlinked to the web address provided in the next bullet point.
- b. **"http://wiley.com"**: This is the URL that you want the text to be anchored to. The URL needs to be surrounded by quotes, which defines it as the intended anchor, or address.
- c. **>**: This markup closes the previously opened `<a href=` HTML tag.
- d. **Wiley**: In this example, this is the text that is linked, or anchored, by the URL. This text appears on your website and is clickable by your visitors.
- e. **</a>**: This HTML markup tag tells the web browser that the hyperlink is closed. Anything that exists between `<a href=".."` and `</a>` will be hyperlinked, or clickable, through to the intended anchor, or web address.

Commonly, designers use URLs to link words to other websites or pages. However, you can also provide hyperlinks to PDF files (Adobe Acrobat), DOC files (Microsoft Word), or any other file type[9], [10].

### Inserting lists

You may need to provide a clean-looking format for lists that you publish on your website. With HTML markup, you can easily provide lists that are for-matted differently, depending on your needs. Ordered lists are numbered sequentially, such as a steps list of things to do, like this:

- a. Write my book chapters.
- b. Submit my book chapters to my publisher.
- c. Panic a little when the book is released to the public.
- d. Breathe a sigh of relief when reviews are overwhelmingly positive!

Ordered lists are easy to do in a program like Microsoft Word, or even in the WordPress post editor because you can use the What You See Is What You Get (WYSIWYG) editor to format the list for you. However, if you want to code an ordered list using HTML, it's a little different. My preceding steps list sample looks like this when using HTML markup:

```
<ol>
<li>Write my book chapters.</li>
<li>Submit my book chapters to my publisher.</li>
<li>Panic a little when the book is released to the public.</li>
<li>Breathe a sigh of relief when reviews are overwhelmingly positive!</li>
</ol>
```

The beginning `<ol>` tells a web browser to display this list as an ordered list, meaning that it will be ordered with numbers starting with the `</ol>` number 1. The entire list ends with the HTML tag, which tells the web browser that the ordered list is now complete.

Between `<ol>` and `</ol>` are list items designated as such by the HTML markup `<li>`. Each list item starts with `<li>` and ends with `</li>`, which tells the web browser to display the line of text as one list item.

If you fail to close any open HTML markup tags for example, if you start an ordered list with `<ol>` but fail to include the closing `</ol>` at the end it messes up the display on your website. The web browser considers anything beneath the initial `<ol>` to be part of the ordered list until it recognizes the closing tag `</ol>`.

Unordered lists are very similar to ordered lists, except instead of using numbers, they use bullet points to display the list, like this:

- a. Write my book chapters.
- b. Submit my book chapters to my publisher.
- c. Panic a little when the book is released to the public.
- d. Breathe a sigh of relief when reviews are overwhelmingly positive!

The HTML markup for an unordered list is just like the ordered list, except instead of using the `<ol>` tag, it uses the `<ul>` tag (ul stands for unordered list):

```
<ul>
<li>Write my book chapters.</li>
<li>Submit my book chapters to my publisher.</li>
<li>Panic a little when the book is released to the public.</li>
<li>Breathe a sigh of relief when reviews are overwhelmingly positive!</li>
```

## REFERENCES

- [1] O. (Oli); Ben S. A. Jones, "The chemistry of cosmetics," Aust. Acad. Sci., 2017.

- [2] N. Johnson-Hunt, “Dreams for Sale: Ideal Beauty in the Eyes of the Advertiser,” *M/C J.*, 2020, doi: 10.5204/mcj.1646.
- [3] F. Andreallo and C. Chesher, “Prosthetic Soul Mates: Sex Robots as Media for Companionship,” *M/C J.*, 2019, doi: 10.5204/mcj.1588.
- [4] L. Sherman, “Inside Fashion’s Instagram Wars,” *Lucky Magazine*, 2015.
- [5] L. Bonniface, L. Green, and M. Swanson, “Affect and an Effective Online Therapeutic Community,” *M/C J.*, 2005, doi: 10.5204/mcj.2448.
- [6] K. Chayka, “Your Internet Friends Are Real: A Defense of Online Intimacy,” *The New Republic*, 2015.
- [7] L. Green, R. Morrison, A. Ewing, and C. Henkel, “Ways of Depicting: The Presentation of One’s Self as a Brand,” *M/C J.*, 2017, doi: 10.5204/mcj.1257.
- [8] P. Koppers, “‘your darkness also/rich and beyond fear’: Community Performance, Somatic Poetics and the Vessels of Self and Other,” *M/C J.*, 2009, doi: 10.5204/mcj.203.
- [9] I. Wagman, “Wasteaminute.com: Notes on Office Work and Digital Distraction,” *M/C J.*, 2010, doi: 10.5204/mcj.243.
- [10] P. Pugsley, “At Home in Singaporean Sitcoms,” *M/C J.*, 2007, doi: 10.5204/mcj.2695.

## CHAPTER 19

### DESIGNING FOR WORDPRESS AS A CMS

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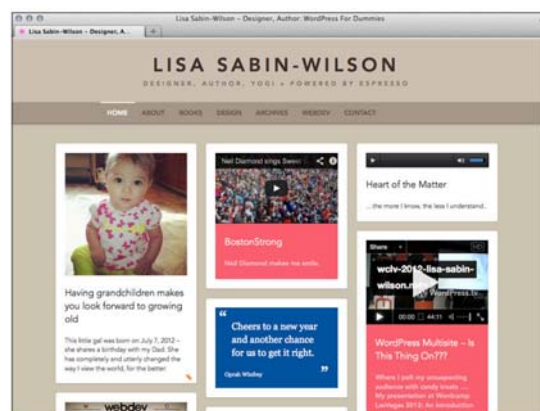
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As I point out throughout this book, WordPress is a tool for creating your own website as well as a blogging platform. The powerful blogging tool WordPress.org, which is self-hosted, is versatile and expandable enough to operate a full website without a blog at all, if you like. Your complete site is created and maintained using a website's content management system (CMS), which has tools for posting, modifying, searching for, and retrieving material. You can manage your website using a CMS even if you know very little HTML. Without ever touching the code necessary to do those activities, you may create, alter, retrieve, and update your material [1]. The self-hosted WordPress.org software may run your complete website, with or without a blog, as this chapter demonstrates in a few different methods. I go through several template settings you may use to designate different areas of your website. Also, you learn how to utilise your website's home page as a static page or a gateway, a page that features excerpts from other site parts and connections to those areas, which may include a link to an internal blog page, if you desire a blog.

By adding components like an e-commerce shop, picture galleries, social communities, and other aspects, you may also add tools to your WordPress website that expand the core capabilities of WordPress. This chapter demonstrates how to utilise WordPress' internal, built-in capabilities to get started using it as a full-fledged CMS tool, while Chapter 16 discusses some of the tools you can add to WordPress to expand it to fit your requirements.

#### Creating the Front Page of Your Website

When you visit a blog that uses WordPress, the blog is often on the front page. My most recent blog entries are shown on the front page of my personal blog, which is (obviously) hosted by WordPress. As seen in Figure 1, this configuration is typical of a WordPress-powered website [2].



**Figure 1:** Illustrated the personal blog, set up like a typical site powered by WordPress.

Nevertheless, Figure 2 shows that there is no blog on the front page of my company's website (<http://webdevstudios.com>), which is likewise hosted by WordPress. The content of a static page, which is not constantly updated chronologically like a blog I made on the WordPress Dashboard, is shown on this site instead of blog articles. This static page acts as a gateway to my portfolio, my design blog, and other parts of my website. The website has a blog as well as all the areas I need to provide my customers the information they need. It also functions as a full-fledged company website.



**Figure 2: Illustrated the business site, set up as a business website rather than a blog.**

How can the front pages of my two websites, which are both powered by the self-hosted edition of WordPress.org, vary so drastically from one another? The WordPress Dashboard's templates hold the key to the problem. WordPress allows you to construct static pages for material that you wish to show on your main website but not on your blog, such as a page for your bio or a list of your services [3].

Creating a front page is a three-step process:

- a. Create a static page.
- b. Designate that static page as the front page of your site.
- c. Tweak the page to look like a website rather than a blog.

Using this method, you can create an unlimited number of static pages to build an entire website. You don't even need to have a blog on this site unless you want to include one.

### Creating a static page

To have a static page appear on the front page of your site, you need to create that page. Follow these steps:

### 1. From the Dashboard, choose Pages ⇔ Add New.

The Add New Page screen opens where you can write a new page to your WordPress site, as shown in Figure 3.

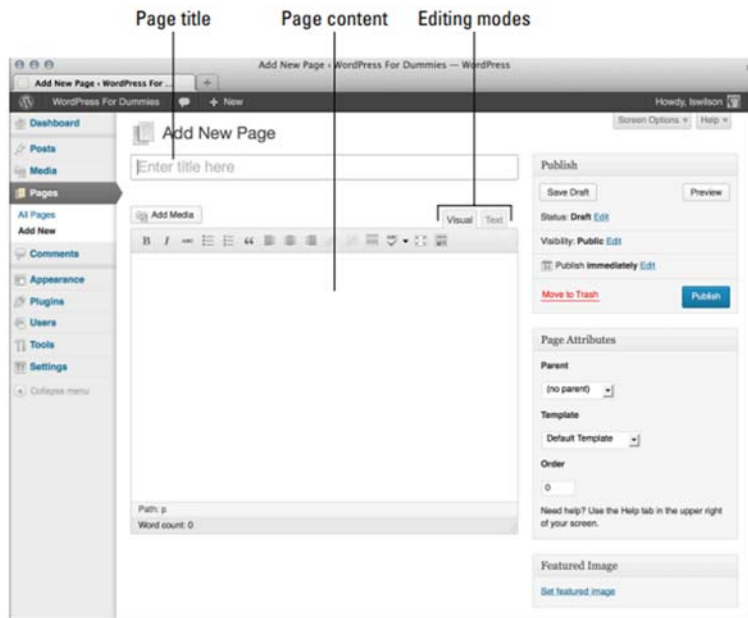


Figure 3: Illustrated the static page that you want to use as your front page.

### 2. Type a title for the page toward the top.

For example, I want to create a Welcome page as the front page for my website, so I entered Welcome to My Website for the page title.

### 3. Type the content of your page in the text box.

The content you include here is up to you. You can simply use text or a combination of text and images, and even a featured image if your theme is using that feature in WordPress.

### 4. In the Page Attributes section, set the options for this page, as needed:

- i. **Parent:** Since you'll utilise this page (in the following step) as your site's first page, leave this setting at (No Parent). To construct a hierarchy of pages for your site navigation, you may place additional pages as subpages under a top-level, or parent, page.
- ii. **Template:** Default Template is selected under the Template option. This option instructs WordPress to format the page you're generating using the default Page template (page.php in your theme template files). Every page you create starts off with the default template.
- iii. **Order:** If you are using the `wp list_ pages()` template element instead of WordPress' built-in menu functionality, this is the order in which you want this page to appear in your navigation menu. [4].



5. (Optional) If you want to preview your page before publishing it, click the Preview button in the upper-right corner.
6. When you're satisfied with your page, click the Publish button.

The page is saved to your database and published to your WordPress site with its own individual URL (or permalink, as explained in Chapter 4). The URL for the static page consists of your website URL and the title of the page. For example, if you titled your page About Me, the URL of the page is <http://yourdomain.com/about-me>.

### Assigning a static page as the front page

You need to tell WordPress that you want the static page you just created to serve as the front page of your site. To do so, follow these steps:

1. From the Dashboard, choose Settings ⇌ Reading.

The Reading Settings page appears.

2. In the Front Page Displays section, select the A Static Page radio button.
3. From the Front Page drop-down list, choose the static page that you want to serve as your front page.

In Figure 4, I choose to display the Welcome to My Website page from the preceding section. Don't worry about the rest of the options on the Reading Settings page because they don't pertain to configuring which page to use for the front page of your site [5].

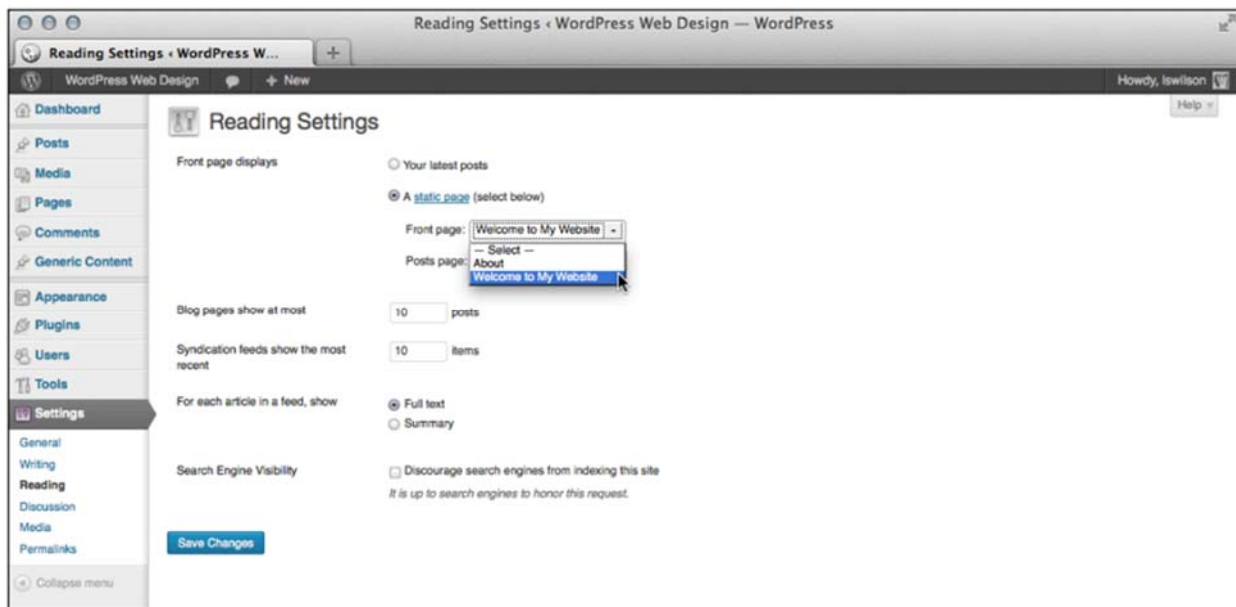
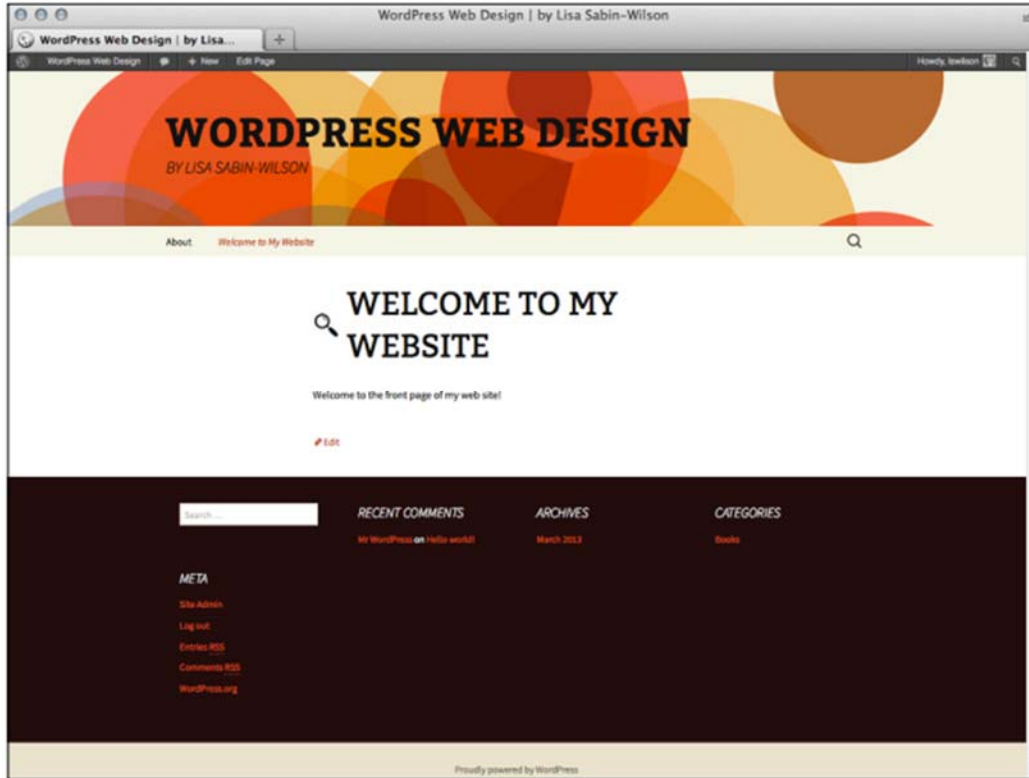


Figure 4: Choose which page to appear as the front page.

4. Click the Save Changes button at the bottom of page.

WordPress displays the page you selected in Step 3 as the front page of your site. Figure 5 shows my site displaying the page I created as my front page.



**Figure 5: Illustrated the WordPress displays the page you selected as your front page.**

### **Tweaking the page to look like a website rather than a blog**

Using a static page as a front page allows you to get creative with the design and layout of your page. You can assign a page template (see “Creating Custom Page Templates to Achieve Different Layouts and Styles,” later in this chapter) and/or use widgets to include different types of content and information, such as:

- a. **Featured Images:** It explains how to install the Featured Pictures functionality that comes with WordPress by default or post thumbnails. If you're using a blog, you may make a page template that contains the titles and summaries of your most recent blog entries and displays them in the body or sidebar along with a featured picture thumbnail.
- b. **Featured Content Slider:** If you're using a blog that features featured images, excerpts of the text, and the title on your front page, you can include a slide show of your most recent posts using a handy plugin for WordPress called the Featured Content Slider (<http://wordpress.org/extend/plugins/wp-featured-content-slider>). This is a nice way to entice readers into your site to read the posts you've written. You may utilise the widget and settings page provided by the Featured Content Slider on your home page.
- c. **Testimonials:** The top page of your website is one of the finest locations to show customer testimonials since it allows visitors to view quotations from your satisfied customers right away. Client testimonials are a popular feature for companies to have on their websites. The IvyCat AJAX Testimonials WordPress plugin (available at <http://wordpress.org/plugins/ivycat-ajax-testimonials/>) allows you to show testimonials.

After you've installed it, you may add testimonials to your main page using the widget it offers. With the plugin, you can easily create a page with all testimonials shown. To learn more, be sure to read the plugin's documentation [6].

- d. **Portfolio:** In the design industry, you'll probably want to showcase some of the web design projects you've recently completed for yourself or your customers. We do this on my company website, <http://webdevstudios.com>, by using the WP Query() template class, categories, and custom post types in WordPress. Establish a category named Portfolio (or whatever you choose to call your body of work) in the Posts ⇌ Categories section of your WordPress Dashboard. Next, add articles inside the category, being sure to give each item a featured picture.

e.

### **Adding a Blog to Your Website**

If you want a blog on your site but don't want to display the blog on the front page, you can add one on your WordPress Dashboard.

#### **Creating a blank page for the blog**

To create a blog for your site, first you need to create a blank page:

- a. **From the Dashboard, choose Pages ⇌ Add New.**
- b. **Type a name for the page in the text box toward the top of the page.**

For example, because this will be the main page for your blog, enter Blog for the name. This automatically sets the page slug to /blog.

- c. **Leave the text box blank.**

When you don't want to show any page content on your blog, you leave this text box empty. Instead, WordPress uses this page to display your blog articles once you designate it as your blog.

- d. **Click the Publish button.**

The blank Blog page is saved to your database and published to your WordPress site. You have a blank page that redirects to <http://yourdomain.com/blog>.

Next, you need to assign the page you just created as your Blog page.

#### **Assigning the new page as a blog**

To designate your new, blank Blog page as a page for your blog posts, follow these steps:

- a. **Choose Settings ⇌ Reading.**  
The Reading Settings page opens.
- b. **From the Posts Page drop-down list, choose the page you just created.**

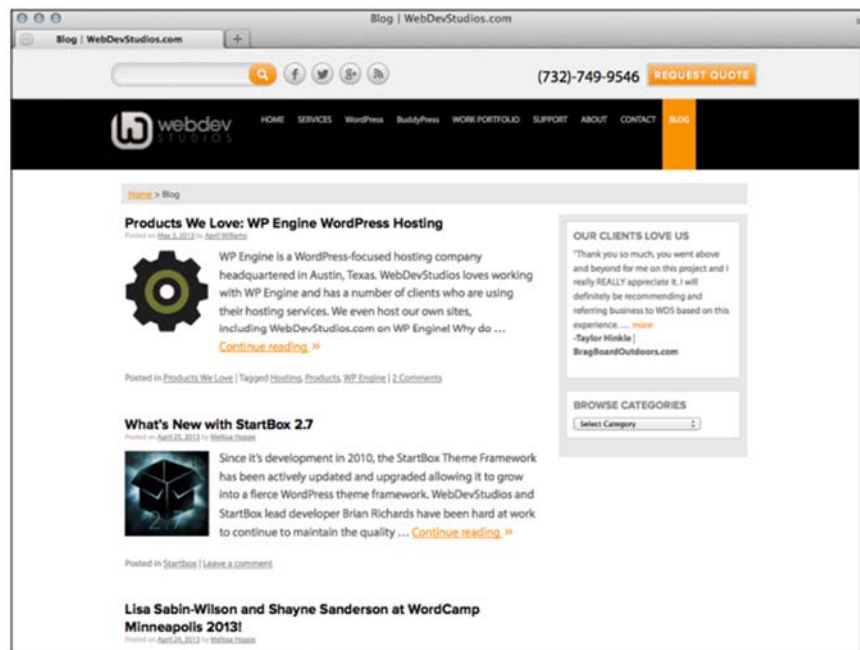
For example, select the Blog page as a posts page.

- c. In the Blog Pages Show at Most section, type the number of posts you want to display in the Posts text box [7].

This setting specifies the number of posts you want to appear on that page at any time. If you enter 5, the Blog page shows the last five posts you've made to your blog. Enter the number of posts you would like to appear based on your preference.

- d. **Click the Save Changes button.**

The options you just set are saved, and your blog is now located at <http://yourdomain.com/blog> (where yourdomain.com is your actual domain name). Figure 6 shows the Blog page on my business site, <http://webdevstudios.com/blog>, which shows the most recent blog posts.



**Figure 6: Illustrated the blog at WebDevStudios with several posts displayed.**

### Creating Custom Page Templates to Achieve Different Layouts and Styles

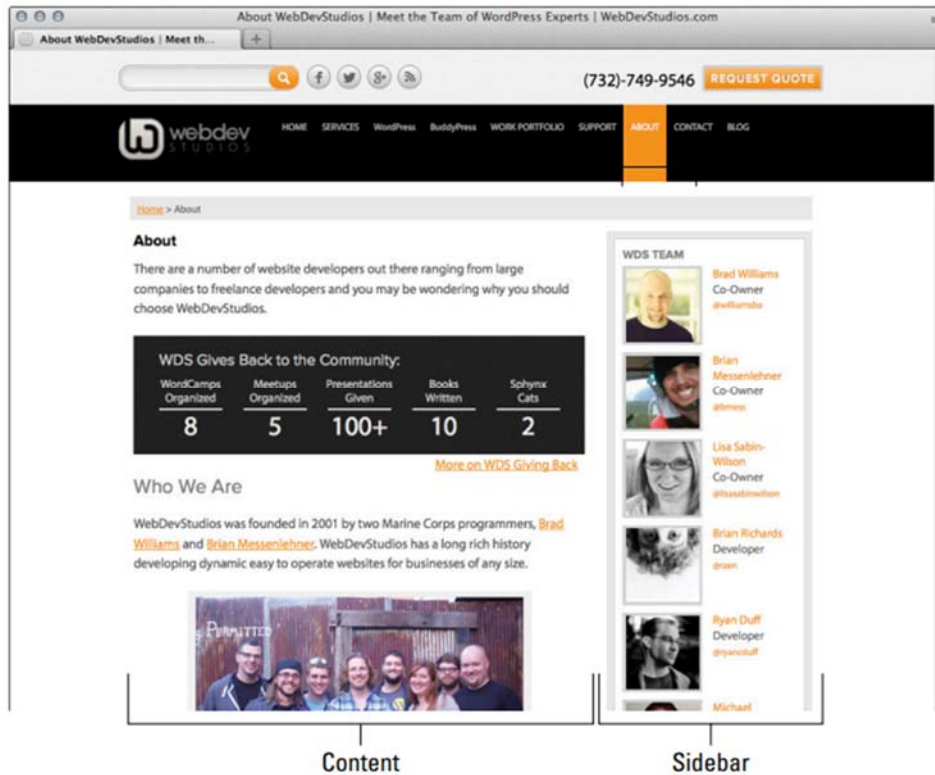
This section introduces you to utilising WordPress content-specific templates to implement various content display views on your website. By specifying the style with CSS and the features and functionalities with template tags, you may create a new sort of reader experience using Page and Category templates.

This is a common occurrence on websites that provide more than just a blog. By using the features provided by WordPress, websites that offer goods and services, or news websites that prioritise stories, content, and advertising, may create a variety of layouts and designs on a single website. [8].

### Viewing the default Page template (page.php)

You can see that the default Page template (page.php) file shows my website's usual static pages in a two-column arrangement by using my own business website as an example. Figure 7 depicts

the layout of the about page at <http://webdevstudios.com/about>. The text is on the left, and a sidebar is on the right.



**Figure 7: Illustrated the standard two-column page layout.**

The header, content, sidebar, and footer files are called in using basic WordPress template tags in the default Page template that generates the display in Figure 7. The template's code resembles that of my theme's page.php template file.

### Creating a new category Page template

You can use the Page template (page.php) in given below the code format is define the layout and style for all the internal pages on your website, providing a standard and consistent style for your site visitors. However, if your website also publishes a portfolio of work that you've done for clients, you probably want that page to have a different style from the rest of the pages, mainly because it presents images that represent your past work [9].

```
<?php get_header(); ?>
<div id="main">
<?php if (have_posts()) : while (have_posts()) : the_post(); ?>
<div id="post-?>?<?php the_ID(); ?>" <?php post_class(); ?>>
<h3 class="title"><a href="?>?<?php the_permalink() ?>" rel="bookmark"><?php the_
title(); ?></a></h3>
<div class="entry">
<?php the_content(__('(more...)')); ?>
</div>
<?php endwhile; else: ?>
```

```

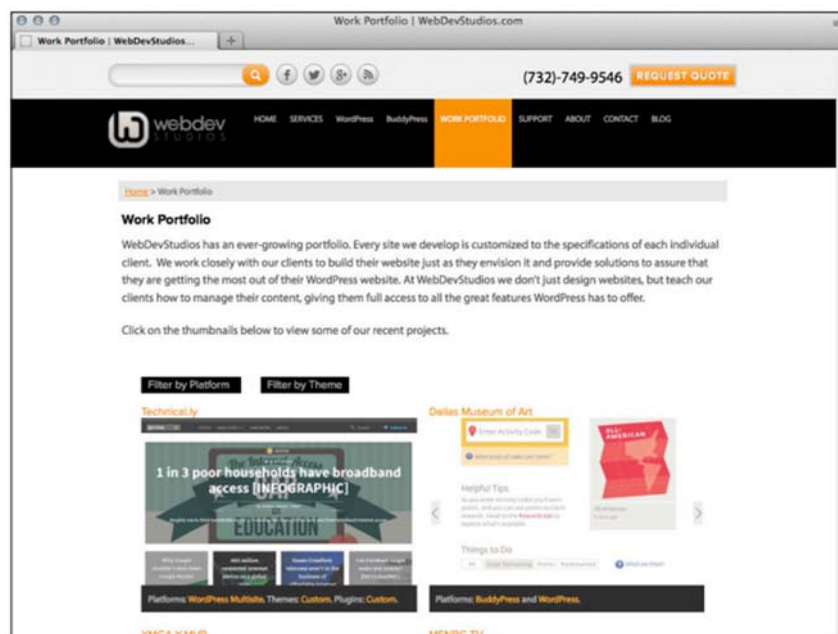
<p><?php _e('Sorry, no posts matched your criteria.');?></p>
<?php endif; ?>
</div>
</div>
<div id="side">
<ul>
<?php if ( !function_exists('dynamic_sidebar') || !dynamic_
sidebar('Blog') ) : ?>
<?php endif; ?>
</ul>
<?php get_footer(); ?>

```

## Creating a new category Page template

For all internal pages on your website, you may set the layout and style using the Page template (page.php) in the aforementioned code, giving your site visitors a uniform and consistent look. But if your website also has a portfolio of the work you've completed for customers, you definitely want that page to be designed differently from the other sites since it features photographs that illustrate your previous work.

To do this, create a Design Portfolio category on your site, then make a post and assign it to the Design Portfolio category for each item you wish to display on the Portfolio page. Figure 8 depicts how my Portfolio page, located at <http://webdevstudios.com/work-portfolio>, looks in a web browser. As you can see, it mostly consists of thumbnail photos that, when clicked, take you to a complete article with a case study on the actual design job.



**Figure 8:** Represented the Portfolio page layout at WebDevStudios.

To accomplish this display, create a specific template for the Design Portfolio category: category-portfolio.php. Every post you create that's assigned to the Design Portfolio category appears in the



format that you've defined in the category-design-portfolio.php template in your theme folder [10].

If you want the Portfolio page to display a listing of images only, assign a featured image to each portfolio post, and then in the category-portfolio.php template, do the following by using the code shown in given codein below:

```
<?php get_header(); ?>
<div id="main" class="fullwidth">
<?php if (have_posts()) : while (have_posts()) : the_post(); ?>
<div id="post-<?php the_ID(); ?>" <?php post_class(); ?>>
<div class="entry">
<a href="<?php the_permalink(); ?>"><?php the_post_thumbnail("thumbnail"); ?></
a></div>
<?php endwhile; else: ?>
<p><?php _e("Sorry, no posts matched your criteria."); ?></p>
<?php endif; ?>
</div>
</div>
<?php get_footer(); ?>
```

## REFERENCES

- [1] A. Gunawan, N. Wahyuni, and R. Akmal, "Designing market systems with content management system (CMS) WordPress," in IOP Conference Series: Materials Science and Engineering, 2019. doi: 10.1088/1757-899X/673/1/012094.
- [2] D. Pratiwi, G. B. Santoso, I. Mardianto, A. Sedyono, and A. Rochman, "Pengelolaan Konten Web Menggunakan Wordpress , Canva dan Photoshop untuk Guru-Guru Wilayah Jakarta Web Content Management Using Wordpress , Canva and Photoshop for Teachers of the Jakarta Region," J. Ilm. Pengabd. pada Masy., 2020.
- [3] T. Dmytrenko, A. Dmytrenko, and T. Derkach, "The «Wooden Structures» discipline educational and methodological complex development on the basis of informational intelligent system," Int. J. Eng. Technol., 2018, doi: 10.14419/ijet.v7i3.2.14381.
- [4] C. A. Soto-Rodriguez and J. Hernandez-Cervantes, "Evaluación de Tecnologías de Sistemas de Gestión de Contenidos (CMS) para el Desarrollo de Modelos de Negocio Electrónicos E-bussines," Rev. Desarro. Económico, 2019, doi: 10.35429/jed.2019.19.6.24.31.
- [5] G. S, S. Shasvat, and H. Shah, "Coded Websites vs Wordpress Websites," Int. J. Adv. Res. Sci. Commun. Technol., 2021, doi: 10.48175/ijarsct-2140.
- [6] P. Ranjan, "Exploring the models of designing blended & online learning courses for adoption in regular teacher education course," Voices Teach. Teach. Educ., 2020.
- [7] M. Sherman, Y. Samchynska, and Y. Korniienko, "Development Of An Information System For Professional Training Of Students In Digital Educational Environment," OPEN Educ. E-Environment Mod. Univ., 2021, doi: 10.28925/2414-0325.2021.1116.



- [8] A. Gupta, S. K. Uniyal, Meenakshi, A. Kumar, and R. D. Singh, “Designing and developing a Bioresource Information Centre for Floral Resources of Himachal Pradesh, Western Himalaya,” *Curr. Sci.*, 2016, doi: 10.18520/cs/v111/i5/808-814.
- [9] S. K. Shivakumar, “Basics of Content Management Systems,” in *Enterprise Content and Search Management for Building Digital Platforms*, 2016. doi: 10.1002/9781119206842.ch3.
- [10] A. W. West, *Practical Web Design for Absolute Beginners*. 2016. doi: 10.1007/978-1-4842-1993-5.

## CHAPTER 20

### CREATING DIFFERENT SIDEBAR AND FOOTER TEMPLATES FOR YOUR PAGES

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You can create separate Sidebar templates for different pages of your site by using a simple include statement. When you write an include statement, you're telling WordPress that you want it to include a specific file on a specific page.

The code that pulls the usual Sidebar template (sidebar.php) into all the other templates, such as the Main Index template (index.php), looks like this:

```
<?php get_sidebar(); ?>
```

What if you create a page and want to use a sidebar that has different information from what you have in the Sidebar template (sidebar.php)? Follow these steps:

1. **Create a new Sidebar template in a text editor, such as Notepad (Windows) or TextMate (Mac).**
2. **Save the file on your computer as sidebar-2.php.**
3. **Upload sidebar-page.php to your themes folder on your web server.**

The new Sidebar template is listed in your theme files on the Edit Themes page. You can open this page by choosing Appearance ⇌ Editor on the Dashboard.

4. **To include the sidebar-page.php template in one of your Page templates, open the desired template on the Edit Themes page (Appearance⇌Editor) and then find this code:**

```
<?php get_sidebar(); />
```

5. **Replace the preceding code with this include code:**

```
<?php get_template_part('sidebar', 'page'); ?>
```

With the `get_template_part()` function, you can include virtually any file in your WordPress templates. You can use this method to create Footer templates for pages on your site, for example. To do this, first create a new template with the filename footer-page.php and then locate the following code in your template:

```
<?php get_footer(); ?>
```

and replace the preceding code with this code:

```
<?php get_template_part('footer', 'page'); ?>
```

You can do multiple things with WordPress to extend it beyond the blog. This chapter gives you a few practical examples with the default Twenty Thirteen theme. The point is to show you how

to use WordPress to create a fully functional website with a CMS platform — anything from the smallest personal site to a large business site.

### Creating Custom Styles for Sticky, Category, and Tag Posts

This part discuss putting together a very basic WordPress theme, which includes a Main Index template using The Loop. You can use a custom tag to display custom styles for sticky posts posts that stay at the top of your blog at all times, categories, and tags on your blog. That special tag looks like this:

```
<div <?php post_class() ?> id="post-<?php the_ID(); ?>">
```

The part of that template tag that is so cool is the `post_class()` section. This template tag tells WordPress to insert specific HTML markup in your template that allows you to use CSS to make custom styles for sticky posts, categories, and tags.

I mention at the very beginning of this book that I assume you already know how to use WordPress, which means you already know all about how to publish new posts to your blog, including the different options you can set for your blog posts, such as categories, tags, and publishing settings. One of the settings is the Stick This Post to the Front Page setting. In this section, I show you how to custom style those sticky posts it's not as messy as it sounds!

For example, I've published a post with the following options set for it:

- a. Stick This Post to the Front Page
- b. Filed in a Category Called WordPress
- c. Tagged with News

By having the `post_class()` tag in your template, WordPress inserts HTML markup that allows you to use CSS to style sticky posts, or posts assigned to specific tags or categories, differently. WordPress inserted the following HTML markup for the post:

```
<div class="post sticky category-wordpress tag-news">
```

CSS selectors and HTML markup and how they work together to create style and format for your WordPress theme. You can go to your CSS file and define styles for the following CSS selectors:

1. **.post:** Use this as the generic style for all posts on your blog. The CSS for this tag is:

```
post {background: #ffffff; border: 1px solid silver; padding: 10px;}
```

This style makes all posts have a white background with a thin silver border and 10 pixels of padding space between the post text and the border of the post.

2. **.sticky:** The concept of sticking a post to your front page is to call attention to that post, so you may want to use different CSS styling to make it stand out from the rest of the posts on your blog:

```
.sticky {background: #ffffff; border: 4px solid red; padding: 10px;}
```

This creates a style for all sticky posts that consists of a white background, a thicker red border, and 10 pixels of padding space between the post text and border of the post.

- .category-wordpress:** Say that you blog a lot about WordPress. Your readers may appreciate it if you give them a visual cue to which posts on your blog are about that topic. You can do that through CSS by telling WordPress to display a small WordPress icon on the top-right corner of all your posts in the WordPress category:

```
.category-wordpress {background: url(wordpress-icon.jpg) top right no-repeat; height: 100px; width: 100px;}
```

This code inserts a graphic `wordpress-icon.jpg` that's 100 pixels in height and 100 pixels in width at the top-right corner of every post you've assigned to the WordPress category on your blog.

- .tag-news:** You can style all posts tagged with news the same way you've styled the categories:

```
.tag-news {background: #f2f2f2; border: 1px solid black; padding: 10px;}
```

This CSS styles all posts tagged with news with a light gray background and a thin black border with 10 pixels of padding between the post text and border of the post.

Using the `post-class()` tag, combined with CSS, to create dynamic styles for the posts on your blog is fun and easy!

## CHAPTER 21

### ENHANCING YOUR WEBSITE WITH PLUGINS

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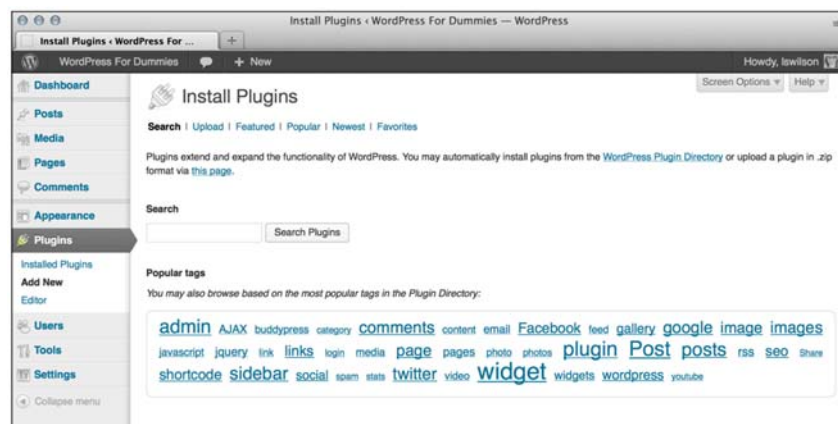
In the chapters leading up to this one, I demonstrate the features and functions that are built into the WordPress platform that you can use to create WordPress themes to provide an appealing visual layout and look for your WordPress website. However, several add-ons, or plugins, for WordPress provide solutions for specific needs, such as e-commerce (selling products), photo galleries and portfolios, web forms, social networking, and more [1]. Plugins exist for WordPress to provide solutions for needs that the majority of WordPress users don't have, so the good people at WordPress create them as optional, add-on plugins rather than make them part of the core WordPress package. That way, WordPress doesn't become a huge, unmanageable mess. Several WordPress plugins are available to you for free from the WordPress Plugin Directory page at <http://wordpress.org/extend/plugins>, or you can search for and install plugins within the Dashboard. Other, more complex, plugins are available for a nominal cost from the developer; you pay a set price to download and use the plugin and to obtain support from the plugin author. In this chapter, I provide you with a mixture of free and commercial (paid) plugins that provide you with the solutions you need for different offerings on your website projects.

#### Installing WordPress Plugins via the Dashboard

This section walks you through the steps of searching for, downloading, installing, and activating free plugins in your WordPress Dashboard [2].

#### Finding free plugins

WordPress makes finding plugins on the Dashboard pretty easy. Choose Plugins ⇌ Add New to open the Install Plugins page, as shown in Figure 1. You have a number of selections, including the search box. Typing a term in this box and clicking the Search Plugins button searches WordPress for plugins that match the term.

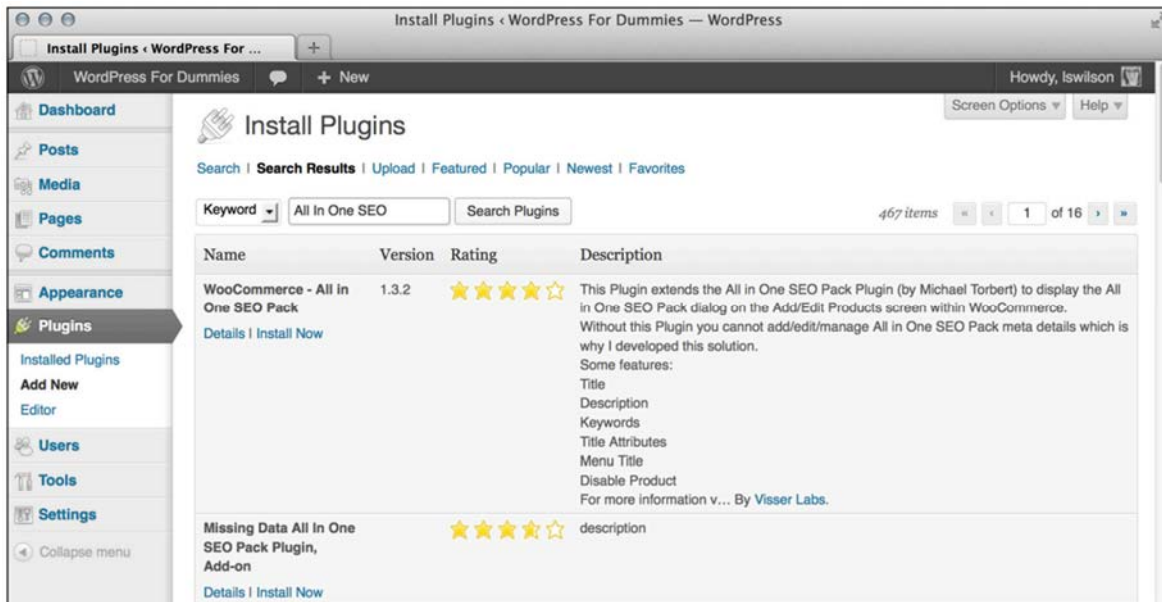


**Figure 1: Illustrated the Process of the Installing Plugins page.**

For example, I typed All in One SEO in the search box and then clicked the Search Plugins button. The Search Results tab, shown in Figure 2, appears.

At the top of the Install Plugins page, you find links for the following tabs:

- a. **Search:** On this tab, you can search for plugins within the repository. This view is the default.
- b. **Search Results:** This tab appears after you have searched for a plugin using the search form. The tab displays the search results for your chosen keyword as mention in Figure 2.
- c. **Upload:** This tab provides you with a means to upload a plugin directly into WordPress.



**Figure 2: Represented the Plugins listed on the Install Plugins page.**

- d. **Featured:** This tab displays a selection of plugins featured by WordPress as helpful plugins you may want to try.
- e. **Popular:** This tab shows the most popular plugins based on criteria selected by WordPress.
- f. **Newest:** This tab shows the most recently added plugins within the repository.
- g. **Favorites:** This tab shows the plugins you've favorite in the WordPress. org Plugins Directory

Each of these tabs provides you with easy access to plugins that you may want to try without searching for them. Explore each of these tabs at your leisure; you may find some useful plugins this way.

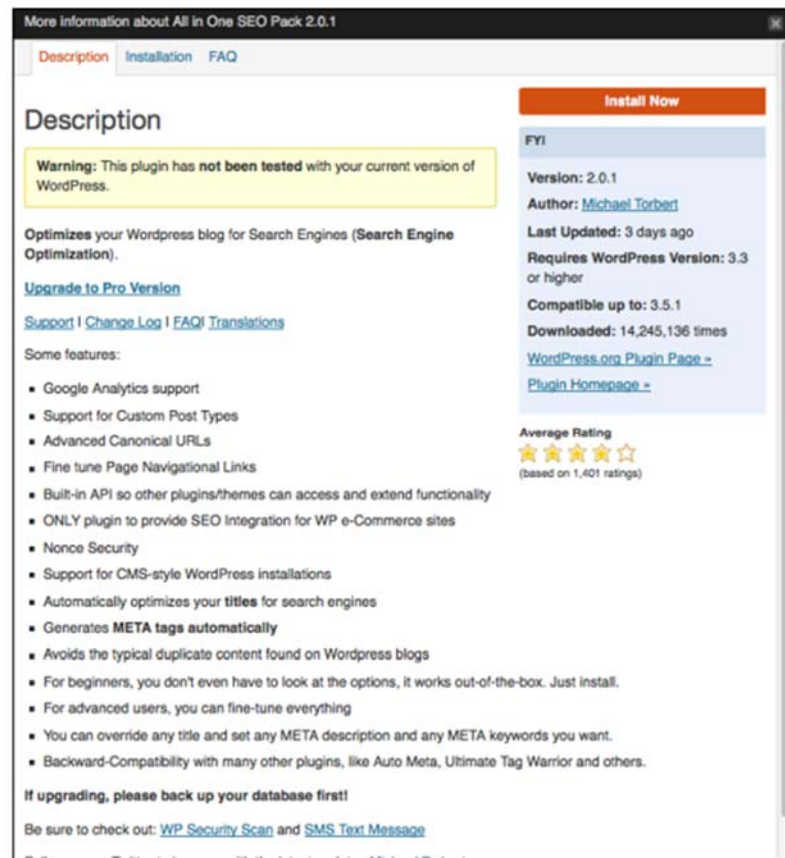
At the bottom of the Install Plugins page is a selection of keywords. When you click a keyword, WordPress displays all plugins tagged with that keyword. For example, clicking gallery shows all plugins tagged with that keyword, such as NextGen Gallery, a popular plugin. Use keywords to find popular plugins among WordPress users without searching by term or plugin name[3].

## Installing and activating a plugin

After you find a plugin you like on the Dashboard, follow these steps to install it:

- a. On the Install Plugins page, click the Details link below the title of the plugin you want to install.

For this example, I clicked the Details link for the All in One SEO Pack plugin that I show you how to search for in the preceding section. The More Information dialog box, which provides a description of the plugin, appears with a number of tabs at the top, as shown in Figure 3.



**Figure 3: Illustrated the More Information dialog box.**

This plugin has not been tested with your current version of WordPress, which is sometimes the case if the plugin author hasn't updated the plugin for the latest version of WordPress. You can choose to install it anyway and give it a try (and then uninstall it if you find that it doesn't work) or try to contact the plugin author for information on whether the plugin works with the latest version [4]–[6].

- b. **Click the Installation tab at the top of the dialog box to view the installation instructions.**

Read the installation instructions before you proceed. Each plugin's installation and activation differ from the others.



- c. Click the Description tab and then click the Install Now button to install the plugin.

The dialog box closes, and the Installing Plugin page appears, with a message stating whether your plugin was installed successfully, as shown in Figure 4 [7].



Figure 4: Illustrated the e Installing Plugin page.

- d. Click the Activate Plugin link to activate the plugin on your website.

If you see anything other than a message indicating success, follow the support instructions in the Plugin Information dialog box on the Description tab, including, possibly, the FAQ tab or Support link. Always note any error messages you see [8]–[10].

- e. Choose Plugins ⇌ Plugins on the Dashboard to verify that the plugin installed successfully.

The plugin appears in the list on the Plugins page, as shown in Figure 5.

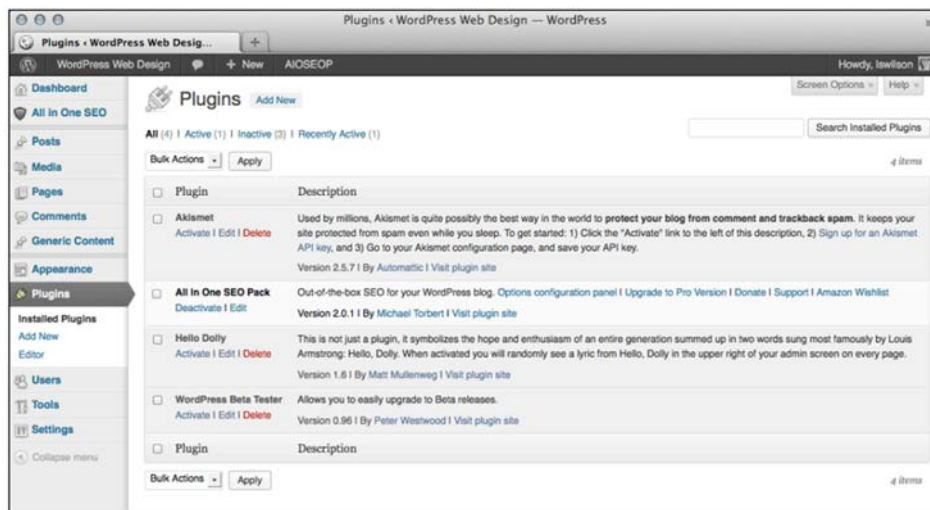


Figure 5: Represented the list of installed plugins.

## REFERENCES

- [1] E. Hellman, “Google’s ‘crypto-cookies’ are tracking chrome users,” *GoToHellman*, 2017.
- [2] T. O. Brien, B. Fox, T. Locher, and E. Redmond, “Sonatype Maven Training,” *Development*, 2009.

- [3] Zaharia Andra, “How Drive-by Download Attacks Work – From Disbelief to Protection,” *Heimdal Security*, 2016.
- [4] B. M. Harwani, *jQuery Recipes*. 2010. doi: 10.1007/978-1-4302-2710-6.
- [5] Pix4D, “Pix4Dcapture,” *Pix4Dcapture 3.5.1*, 2016.
- [6] P. Lenz, *Build Your Own Ruby on Rails Web Applications*. 2007.
- [7] R. van der Spuy, *Learn Pixi.js*. 2015. doi: 10.1007/978-1-4842-1094-9.
- [8] P. Shukla, S. Kumar, S. Chhajed, and M. Ochoa, *Learning Elastic Stack 6.0: a beginner’s guide to distributed search, analytics, and visualization using Elasticsearch, Logstash and Kibana*. 2017.
- [9] J. Friesen, *Beginning Java™ SE 6 Platform From Novice to Professional*. 2007.
- [10] J. DeHart, F. Kuhns, J. Parwatikar, J. Turner, C. Wiseman, and K. Wong, “The open network laboratory: A resource for networking research and education,” in *Computer Communication Review*, 2005. doi: 10.1145/1096536.1096547.

## CHAPTER 22

### INSTALLING PLUGINS MANUALLY

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Manually installing a plugin isn't as easy as the method I describe in the preceding section. However, you can use the preceding installation method only for free plugins from the Plugin Directory page within the Dashboard. Any commercial (or paid) plugins require that you install them manually via File Transfer Protocol, for example [1], [2].

Follow these steps to install a plugin via FTP in your WordPress installation:

**1. Download the plugin from the source to your computer.**

Commercial plugin developers provide you with links that you can click to download the plugin files usually, in a Zip file.

Throughout this chapter, I describe a number of commercial plugins that you may want to use on your site.

**2. After you download the plugin to your computer, if it's in a compressed Zip file, unzip it to access the uncompressed files.**

If the file is zipped (compressed), use a free web application (such as WinZip) to unzip the plugin.

**3. Connect to your server using your preferred FTP application.**

If you're not sure how to transfer files with FTP.

**4. Navigate to the wp-content folder within the WordPress installation for your website.**

**5. In the wp-content directory, find the plugins directory; upload your plugin to this location via FTP.**

Congratulations your plugin is installed, but you still need to activate it.

**6. Choose Plugins ⇌ Plugins on your Dashboard.**

The Installing Plugin page appears.

**7. Click the Activate link that appears below the plugin's title.**

Some of the plugins I describe in this chapter are free ones that you can find on the Plugin Directory page, and others are commercial plugins that you have to download directly from the developers' websites. I indicate whether the plugin can be installed automatically within your Dashboard or needs to be installed manually through FTP [3].

## Exploring E-Commerce Plugins to Use on Your Site

With a lot of businesses and individuals turning to the web to increase their profit margins or make a little money, e-commerce solutions have become a hot item in the WordPress world. WordPress already makes creating a website and publishing information easy and some crafty and creative developers have designed easy-to-use plugins for WordPress that help people sell products on their websites.

### Understanding what you can do with e-commerce plugins

E-commerce plugins add features to your WordPress installation that allow you to:

1. Create a dedicated store of product listings.
2. Upload and display product images.
3. Attach prices to each product.
4. Provide inventory tracking.
5. Include payment gateways, such as PayPal or Google Checkout, to make it easy for visitors to purchase items directly from your website.
6. Configure sales tax and shipping rates.

Some examples of the types of products people use WordPress e-commerce plugins to sell are:

1. **Physical products:** Jewelry, clothing, or digital equipment
2. **Downloadable products:** E-books or software, such as plugins
3. **Memberships:** Clubs, societies, or members-only websites

### Examining some recommended plugins

When I get a request from a client to build an e-commerce website using WordPress, I look at four plugins to provide the solution: Cart66, Woo Commerce, WP e-Commerce, and Shop. These four plugins all accomplish the task of building an e-commerce website, and each plugin differs in the way the store gets built. I don't have a preference of one over the other, and I usually stick with the platform I'm most comfortable with or the one I think may be easiest for my clients to use, depending on their skill levels [4]–[6].

#### Cart66:

Cart66 is an easy-to-use e-commerce solution that plugs into an existing WordPress theme with minimal tweaking required to get it to display correctly. You can sell physical or digital products, manage orders, sell subscriptions for members-only websites, and manage affiliates. This plugin isn't free; you must purchase and download it from the Cart66 website, and pricing starts at \$89. The Cart66 plugin requires manual installation via FTP.

With Cart66, follow these steps to create a store:

1. Install and activate the Cart66 plugin via FTP.

2. Configure the settings on the Cart66 Options page on your Dashboard (choose Cart66⇒Settings) for your preferred shipping, payment, and shop management.
3. Add products, including product images and prices, in the Products interface (choose Cart66⇒Products).
4. Create a new post or page in WordPress about your product.
5. Add the product info from the shop to your post by using the Add Product feature that Cart66 has added to the post editor [7].

## Woo-Commerce

The Woo Commerce plugin is a toolkit for WordPress that helps you sell anything on your website. The primary Woo Commerce plugin is free to download, and after you have it installed, you can browse a full selection of extensions to add specific features to the WooCommerce plugin, such as:

- i. Accounting extensions,
- ii. Marketing extensions,
- iii. Payment gateway extensions,
- iv. Reporting extensions,
- v. Shipping extensions

You can either download the WooCommerce plugin from the WooCommerce website or install it via the Plugins page on your WordPress Dashboard. The extensions, however, aren't free they must be purchased and downloaded via the WooCommerce website. This plugin works well with a multisite setup in WordPress which allows multiple sites to be created in a single installation of WordPress and with the BuddyPress social community plugin. WooCommerce also makes it easy to spotlight different areas of your store, or individual products, with shop-specific widgets and short codes [8].

## WP e-Commerce

The WP e-Commerce plugin is freely available on the Plugin Directory page at <http://wordpress.org/extend/plugins/wp-e-commerce>. You can use the free version to sell products, manage sales and inventory, and run a full shop on your website; however, Instinct Entertainment, the developers behind the plugin, also have commercial upgrades available for purchase in their shop at <http://getshopped.org/extend/premium-upgrades>. The upgrades address further needs, as described in the following list:

- a. **Gold Cart:** Extends the WP e-Commerce plugin by providing additional features, such as galleries, store searches, multiple image uploads, and additional payment gateway providers. Cost: \$47.00.
- b. **Affiliate Plugin:** Helps manage affiliates for your product sales. Cost: \$47.00.
- c. **DropShop:** Creates a beautiful drag-and-drop shopping interface where visitors can simply click and drag a product to the shopping cart for purchase. Cost: \$117.00.

The WP e-Commerce plugin is a bit more challenging when integrating the shop and product pages into your existing WordPress theme, because it has its own set of templates that need to be configured and styled to coordinate well with your existing website design. Figure 1, displays the dvDepot website (<http://dvdepot.com>), which sells DVD- and video-recording equipment via the WP e-Commerce plugin.

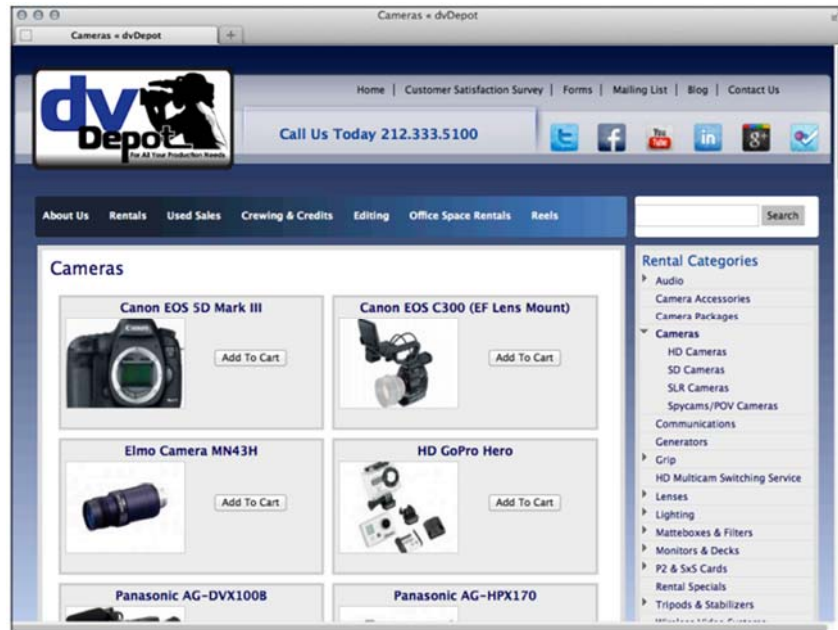


Figure 1: Represented a site that uses the WP e-Commerce plugin.

## Shopp

Shopp adds a feature-rich online store to your WordPress website with the installation of its plugin. Shopp costs \$55 for single-user access and \$299 for developer access. Shopp also has several upgrades you can purchase for \$25 each for various payment gateways, shipping add-ons, storage engine add-ons, and priority support credits. The Shopp plugin website states that the plugin works out of the box with no theme adjustments necessary; however, in my experience, theme adjustments are required in most cases. Other features include [9], [10]:

- a. Theme widgets for shop-related items, such as featured and random products and product categories,
- b. Multiple product images,
- c. Product categorization, allowing you to create multiple category levels for your products,
- d. Product searches

## REFERENCES

- [1] O. R. Seynnes and N. J. Cronin, "Simple muscle architecture analysis (SMA): An ImageJ macro tool to automate measurements in B-mode ultrasound scans," *PLoS One*, 2020, doi: 10.1371/journal.pone.0229034.

- [2] F. Zeitvogel and M. Obst, "ScatterJn: An ImageJ Plugin for Scatterplot-Matrix Analysis and Classification of Spatially Resolved Analytical Microscopy Data," *J. Open Res. Softw.*, 2016, doi: 10.5334/jors.89.
- [3] M. Giannuzzi, G. Papadia, and C. Pascarelli, "IC.IDO as a tool for displaying machining processes. The logic interface between computer-aided-manufacturing and virtual reality," in *Procedia CIRP*, 2020. doi: 10.1016/j.procir.2020.05.026.
- [4] F. Varghese, A. B. Bukhari, R. Malhotra, and A. De, "IHC profiler: An open source plugin for the quantitative evaluation and automated scoring of immunohistochemistry images of human tissue samples," *PLoS One*, 2014, doi: 10.1371/journal.pone.0096801.
- [5] N. Raval, A. Razeen, A. Machanavajjhala, L. P. Cox, and A. Warfield, "Permissions plugins as android apps," in *MobiSys 2019 - Proceedings of the 17th Annual International Conference on Mobile Systems, Applications, and Services*, 2019. doi: 10.1145/3307334.3326095.
- [6] A. S. M. Uzsoy, P. Zareiesfandabadi, J. Jennings, A. F. Kemper, and M. W. Elting, "Automated tracking of *S. pombe* spindle elongation dynamics," *J. Microsc.*, 2021, doi: 10.1111/jmi.13044.
- [7] T. J. B. Dewez, D. Girardeau-Montaut, C. Allanic, and J. Rohmer, "Facets: A Cloudcompare Plugin To Extract Geological Planes From Unstructured 3d Point Clouds," *Int. Arch. Photogramm. Remote Sens. Spat. Inf. Sci.*, 2016, doi: 10.5194/isprs-archives-xli-b5-799-2016.
- [8] A. Kirchhoff *et al.*, "Toward a service-based workflow for automated information extraction from herbarium specimens," *Database*, 2018, doi: 10.1093/database/bay103.
- [9] P. V. Hornbeck *et al.*, "PhosphoSitePlus: A comprehensive resource for investigating the structure and function of experimentally determined post-translational modifications in man and mouse," *Nucleic Acids Res.*, 2012, doi: 10.1093/nar/gkr1122.
- [10] A. Yim *et al.*, "MitoXplorer, a visual data mining platform to systematically analyze and visualize mitochondrial expression dynamics and mutations," *Nucleic Acids Res.*, 2020, doi: 10.1093/nar/gkz1128.



## CHAPTER 23

# CREATING PHOTO GALLERIES OR PORTFOLIOS

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Anybody who has to include a gallery or collection of visual design work, such as design professionals and logo designers, may find this section's instructions on adding picture galleries to your site to their advantage. Even for bakeries whose owners want to showcase their cake decorations or chefs who want to showcase a picture gallery emphasising their delectable culinary masterpieces, I've created a few websites with galleries! There are many methods to present a picture gallery on your website. Using WordPress' built-in gallery function is one option. If you want a more intricate solution, the alternative is to install a powerful picture gallery plugin that enables you to build albums with galleries [1].

### Inserting images into your page or post

You must be familiar with how to upload photos to a post or page before using WordPress' built-in gallery function to build a photo gallery. The Add an Image dialogue box in the WordPress image uploader makes it very simple to add photos to a post or page. There are two methods to add images: either from a website or your PC [2], [3].

### Adding an image from a URL

Follow these steps to add an image to your page (or post) from a URL:

- 1. From the Dashboard, choose Pages ⇨ Add new to add an image to your page. If you want to insert the image in a blog post, choose Posts ⇨ Add New.**

The Add New Page page (or Add New Post page) appears.

- 2. Click the Add Media button.**

The Insert Media dialog box opens, enabling you to choose images from your hard drive or from a location on the web as mention in Figure 1.

- 3. Click the Insert from URL link in the Insert Media dialog box.**

The Insert from URL window opens.

- 4. Type the URL of the image in the text box.**

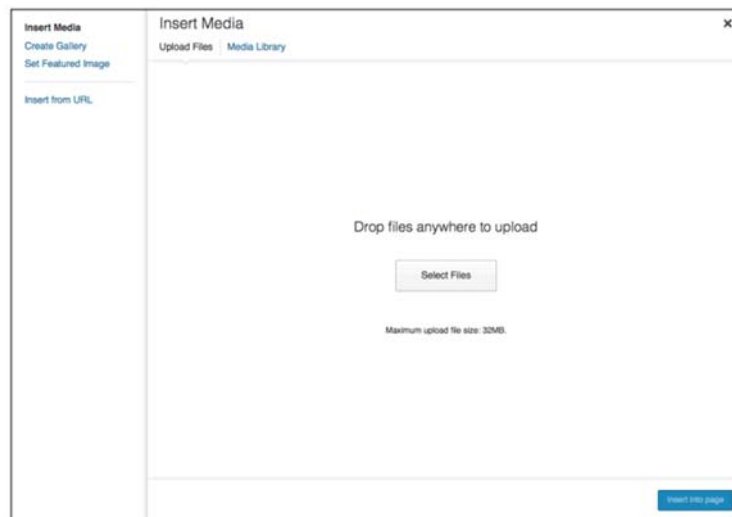
Type the full URL, including the http:// and www. Portions of the address. You can find the URL of any image on the web by right-clicking (Windows) or Control-clicking (Mac) and then choosing Properties.

- 5. Type a title for the image in the Title text box, and then type a description of the image in the Alt Text text box.**

When an image fails to load correctly for any reason, the alternative text (also known as ALT tags) is what shows up in the browser and provides the user with a description of the picture. It's also a smart SEO (search engine optimisation) practise to include alternative text since it allows search engines like Google more descriptive material to utilise in their listings and directories to better classify and describe your website [4], [5].

**6. (Optional) Type the image caption in the Caption text box.**

The words you type in the text box display as a caption below the image on your site. (WordPress automatically adds a class called wp-caption in the markup you can use this class in the CSS to provide a style for the image captions on your site.)



**Figure 1: Illustrated the WordPress Insert Media dialog box.**

**7. Choose an alignment option by selecting None, Left, Center, or Right.**

**8. Select the URL you want the image linked to.**

Whatever option you choose determines where your readers go when they click the image you've uploaded:

- a) None: Readers can't click the image.
- b) Image URL: Readers can click through to the direct image itself.
- c) Custom URL: Readers can click through to a URL you designate.

**9. Click the Insert into Page (or Insert into Post) button.**

The HTML markup for the image is inserted into the body of your page or post.

**Adding an image from your computer**

To add an image from your own hard drive to your page or post, follow these steps:

**1. Follow Steps 1 and 2 in the preceding section.**

The Insert Media dialog box appears.

**2. In the Insert Media dialog box, click the Select Files button.**

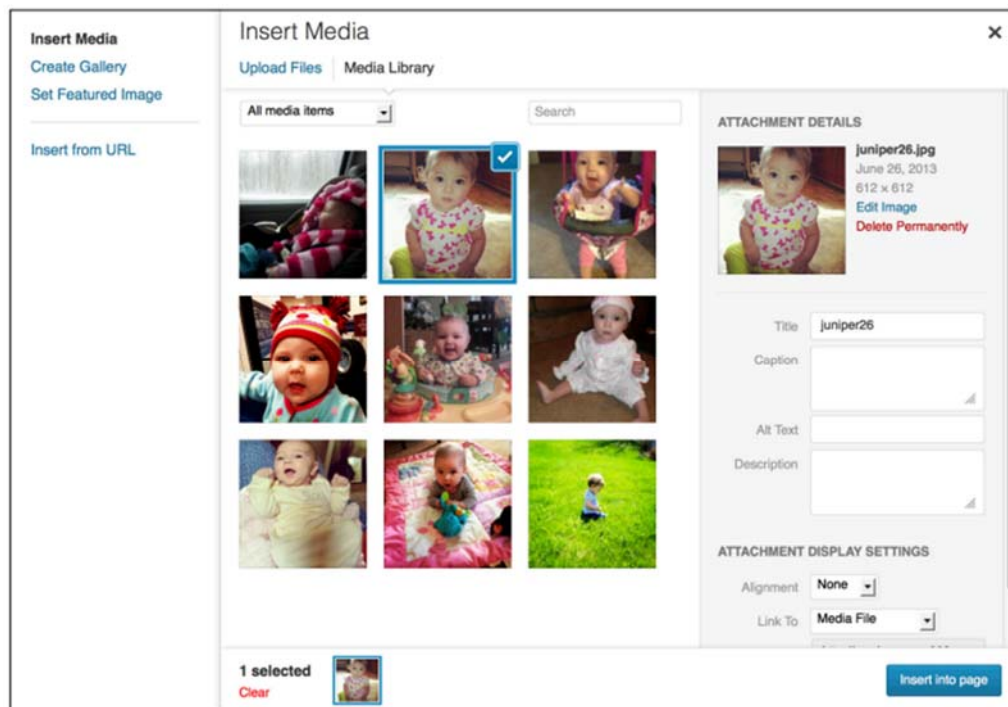
A dialog box opens from which you can select images from your hard drive.

**3. Select one or more images, and then click Open.**

The images you select are uploaded from your computer to your web server. WordPress displays a progress bar during the upload and then displays the Image Options dialog box when the upload is finished.

**4. Edit the details of each image by clicking on the image thumbnail.**

A box that contains several image options appears on the right side, as shown in Figure 2.



**Figure 2: Illustrated that You can set several options for your images after you upload them.**

**5. Fill in the following information about each image:**

- a. **Title:** Type a title for the image.
- b. **Caption:** Type a caption (such as this is a flower from my garden) for the image.
- c. **Alt Text:** Type the alternative text (as described in the preceding section) for the image.
- d. **Description:** Type a description of the image.
- e. **Alignment:** Choose None, Left, Center, or Right.
- f. **Link To:** Type the URL you want the image linked to. Whatever option you choose determines where your readers go when they click the image you've uploaded: Click None to prevent the image from being clickable; Media URL to let readers click

through to the direct image; Attachment Page to let readers click through to the post that the image appears in; and Custom URL to let them type their own URLs in the Custom URL text box[6]–[8].

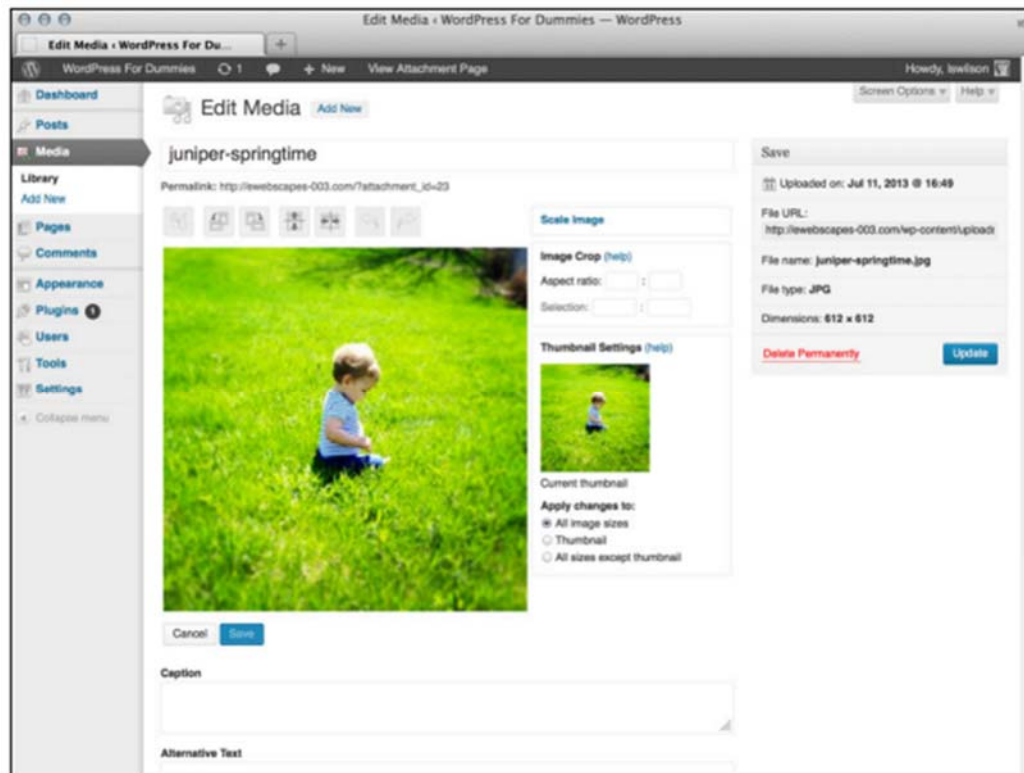
- g. **Size:** Choose Thumbnail, Medium, Large, or Full Size.

WordPress automatically creates small- and medium-size versions of the images you upload through the built-in image uploader. A thumbnail is a smaller version of the original file. You can edit the size of the thumbnail by choosing Settings ⇌ Media. In the Image Sizes section, designate the height and width of the small and medium thumbnail images generated by WordPress.

If you're uploading more than one image, skip the rest of the steps in this list and head to the "Inserting a photo gallery" section, later in this chapter[9].

- h. **(Optional) Click the Edit Image link (to the right of the thumbnail of the image) to edit the appearance of each image.**

The Edit Media page appears, as shown in Figure 3.



**Figure 3: Represented the WordPress image editor options.**

These buttons are shown across the top of the image editor on the Edit Media page:

- a. **Crop:** Click this button to cut the image down to a smaller size.
- b. **Rotate Counter-Clockwise:** Click this button to rotate the image to the left.
- c. **Rotate Clockwise:** Click this button to rotate the image to the right.

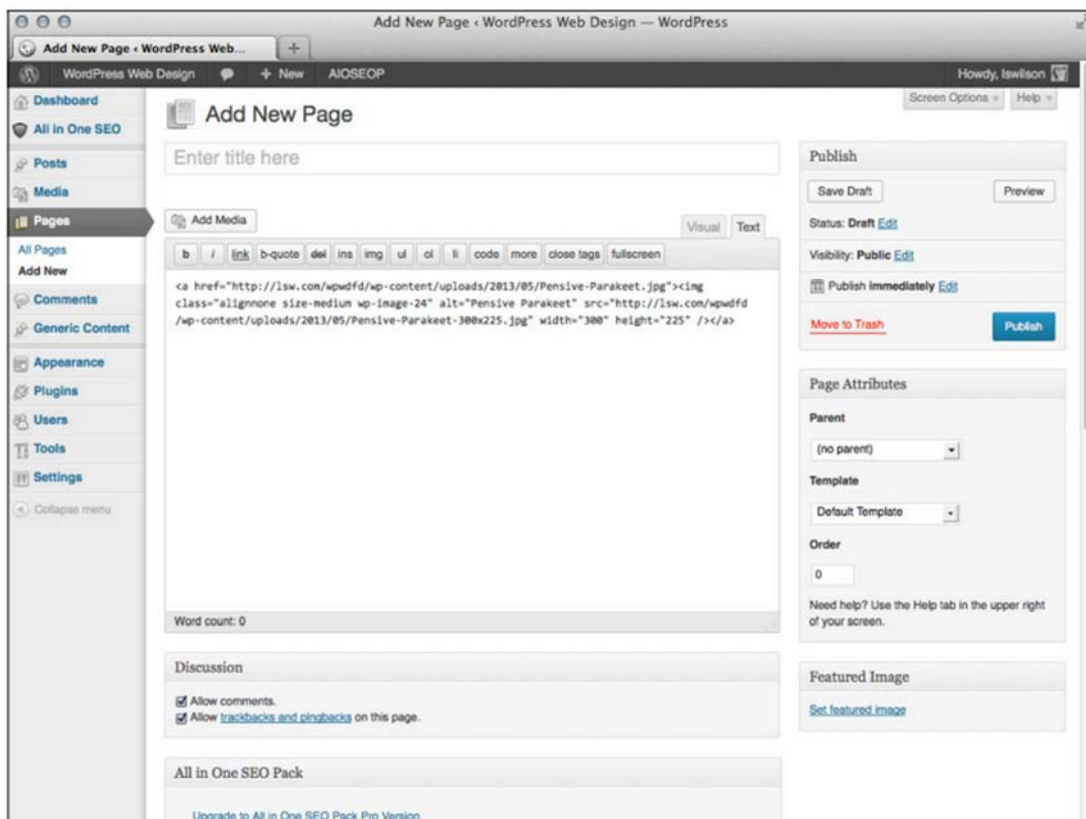
- d. **Flip Vertically:** Click this button to flip the image upside down and back again.
- e. **Flip Horizontally:** Click this button to flip the image from right to left and back again.
- f. **Undo:** Click this button to undo any changes you've made.
- g. **Redo:** Click this button to redo image edits that you've undone.
- h. **Scale Image:** Click this button to open the drop-down menu that lets you set a specific width and height for the image.
- i. **After you set the options for the image you've uploaded, click the Update button to save your changes.**

You return to the Insert Media page.

- j. **Click the Insert into Page button in the lower-right corner**

In HTML view, you can see that WordPress has inserted the HTML code to display the image(s) on your page, as shown in Figure 4; you can continue editing your page, save it, or publish it [10], [11].

To see the image and not the code, click the Visual tab that's just above the text box.



**Figure 4: Represented the WordPress inserts the correct HTML code for your uploaded image into the page.**

## REFERENCES

- [1] S. L. Craig *et al.*, “Towards an integrative self: a digital photo elicitation study of resilience among key marginalized populations of sexual and gender minority youth,” *Int. J. Qual. Stud. Health Well-being*, 2021, doi: 10.1080/17482631.2021.1961572.
- [2] M. Barszcz, J. Montusiewicz, M. Pańnikowska-Łukaszuk, and A. Sałamacha, “Comparative analysis of digital models of objects of cultural heritage obtained by the “3D SLS” and ‘SfM’ methods,” *Appl. Sci.*, 2021, doi: 10.3390/app11125321.
- [3] S. Jones and C. Pausé, “The Adipositivity Project: the first fifteen years,” *Fat Stud.*, 2022, doi: 10.1080/21604851.2022.2041829.
- [4] S. Martha, “The Backpack Journalist Is a ‘Mush of Mediocrity,’” *USC Annenb. – Online Journal. Rev.*, 2002.
- [5] J. Cirklová, “Reaffirming Identity Through Images. The commodification of Illusions in the Contemporary Presentation of Self,” *methaodos Rev. ciencias Soc.*, 2020, doi: 10.17502/m.rcs.v8i1.351.
- [6] J. Lengstorf, *PHP jQuery*. 2010.
- [7] M. Bucolo, A. Buscarino, L. Fortuna, and S. Gagliano, “Ebatronics: A New Paradigm for Experimental Laboratory in Applied Science and Technology,” *Phys. Educ.*, 2021, doi: 10.1142/S2661339521500165.
- [8] I. Astrukov, “Digitization of Slide Film (35mm) – Transfer, Postproduction, Admissible Changes,” *Cult. Hist. Herit. Preserv. Present. Digit.*, 2021, doi: 10.26615/issn.2367-8038.2021\_1\_012.
- [9] F. A. Fanni *et al.*, “PAC-PAC: Intelligent storytelling for point-and-click games on the web,” in *International Conference on Intelligent User Interfaces, Proceedings IUI*, 2019. doi: 10.1145/3308557.3308710.
- [10] S. Varghese and D. K. T. Kumari, “Effect of Social Media on Employee Productivity in Education Sector,” *Int. J. Eng. Manag. Res. Page Number*, 2018.
- [11] F. Monti and S. Keene, *Museums and Silent Objects: Designing Effective Exhibitions*. 2016. doi: 10.4324/9781315596501.