

What Is a WAMP, MAMP, or LAMP?

- WAMP, MAMP, and LAMP are abbreviations for “Windows, Apache, MySQL, and PHP,” “Mac, Apache, MySQL, and PHP,” and “Linux, Apache, MySQL, and PHP.” These abbreviations each describe a fully functioning setup used for developing dynamic internet web pages.
- WAMPs, MAMPs, and LAMPs come in the form of packages that bind the bundled programs together so that you don’t have to install and set them up separately. This means you can simply download and install a single program and follow a few easy prompts to get your web development server up and running fast, with minimal hassle.
- During installation, several default settings are created for you. The security configurations of such an installation will not be as tight as on a production web server, because it is optimized for local use. For these reasons, you should never install such a setup as a production server.
- For developing and testing websites and applications, one of these installations should be entirely sufficient. If you choose not to go the WAMP/MAMP/LAMP route for building your own development system, you should know that downloading and integrating the various parts yourself can be very time-consuming and may require a lot of research in order to configure everything fully.

Installing AMPPS on Windows

- There are several available WAMP servers, each offering slightly different configurations. Of the various open source and free options, one of the best is AMPPS.
- Download Link have been specified in your book. Follow the Wizard to install AMPPS.
- Testing the Installation: The first thing to do at this point is verify that everything is working correctly. To do this, enter either of the following two URLs into the address bar of your browser:
localhost
127.0.0.1

Accessing the Document Root (Windows)

- The *document root* is the directory that contains the main web documents for a domain. This directory is the one that the server uses when a basic URL without a path is typed into a browser, such as *http://yahoo.com* or, for your local server, *http://localhost*.
- By default AMPPS will use the following location as the document root:
C:\Program Files (x86)\Ampps\www
- To ensure that you have everything correctly configured, create a small HTML file along the following lines using Windows Notepad or any other program or text editor,


```
<!DOCTYPE html>
<html lang="en">
<head>
<title>A quick test</title>
</head>
<body>
Hello World!
</body>
</html>
```
- Once you have typed this, save the file into the document root directory, using the filename *test.html*. If you are using Notepad, make sure that the value in the “Save as type” box is changed from “Text Documents (*.txt)” to “All Files (*.*)”.
- You can now call this page up in your browser by entering the following URL in its address bar :
localhost/test.html
- Remember that serving a web page from the document root (or a subfolder) is different from loading one into a web browser from your computer’s filesystem. The former will ensure access to PHP, MySQL, and all the features of a web server, while the latter will simply load the file into the browser, which will do its best to display it but will be unable to process any PHP or other server instructions. So, you should generally run examples using the *localhost* preface from your browser’s address bar, unless you are certain that the file doesn’t rely on web server functionality.

Alternative WAMPs

- When software is updated, it sometimes works differently from how you expect, and bugs can even be introduced. So, if you encounter difficulties that you cannot resolve in AMPPS, you may prefer to choose one of the other solutions available on the web.
Here’s a selection of some of the best:

- EasyPHP
- XAMPP
- WAMPServer
- Glossword WAMP

Installing AMPPS on macOS

- AMPPS is also available on macOS, and you can download it from the [website](#). If your browser doesn't open it automatically once it has downloaded, double-click the *.dmg* file, and then drag the *AMPPS* folder over to your *Applications* folder .
- Now open your *Applications* folder in the usual manner, and double-click the AMPPS program. If your security settings prevent the file being opened, hold down the control key and click the icon once. A new window will pop up asking if you are sure you wish to open it. Click Open to do so. When the app starts you may have to enter your macOS password to proceed.
- Once AMPPS is up and running, a control window will appear at the bottom left of your desktop. You may notice that the default version of PHP in AMPPS is 5.6.

Accessing the Document Root (macOS)

- By default, AMPPS will use the following location as the document root:
`/Applications/Ampps/www`
- To ensure that you have everything correctly configured, create a small HTML file along the following lines using the TextEdit program or any other program or text editor:

```
<html>
<head>
<title>A quick test</title>
</head>
<body>
Hello World!
</body>
</html>
```
- Once you have typed this, save the file into the document root directory using the filename *test.html*. You can now call this page up in your browser by entering the following URL in its address bar :
`localhost/test.html`

- Remember that serving a web page from the document root (or a subfolder) is different from loading one into a web browser from your computer's filesystem. The former will ensure access to PHP, MySQL, and all the features of a web server, while the latter will simply load the file into the browser, which will do its best to display it but will be unable to process any PHP or other server instructions.

Installing a LAMP on Linux

- Many Linux versions come preinstalled with a web server and MySQL. To find out, try entering the following into a browser and see whether you get a default document root web page:
localhost
- If this works, you probably have the Apache server installed and may well have MySQL up and running too; check with your system administrator to be sure.
- If you don't yet have a web server installed, however, there's a version of AMPPS available that you can download from the website.

Working Remotely

- If you have access to a web server already configured with PHP and MySQL, you can always use that for your web development. But unless you have a high-speed connection, it is not always your best option. Developing locally allows you to test modifications with little or no upload delay.
- Accessing MySQL remotely may not be easy either. You should use the secure SSH protocol to log into your server to manually create databases and set permissions from the command line. Your web hosting company will advise you on how best to do this and provide you with any password it has set for your MySQL access (as well as, of course, for getting into the server in the first place).

Logging In

- Windows users should install a program such as **PuTTY**, for Telnet and SSH access (remember that SSH is much more secure than Telnet).
- On a Mac, you already have SSH available. Just select the *Applications* folder, followed by *Utilities*, and then launch Terminal. In the Terminal window, log in to a server using SSH as follows:
`ssh mylogin@server.com`

where *server.com* is the name of the server you wish to log into and *mylogin* is the username you will log in under. You will then be prompted for the correct password for that username and, if you enter it correctly, you will be logged in.

Using FTP

- To transfer files to and from your web server, you will need an FTP program. If you go searching the web for a good one, you'll find so many that it could take you quite a while to come across one with all the right features for you. Example: open source [FileZilla](#), for Windows, Linux, and macOS 10.5 or newer.

Using a Program Editor

- Although a plain-text editor works for editing HTML, PHP, and JavaScript, there have been some tremendous improvements in dedicated program editors, which now incorporate very handy features such as colored syntax highlighting.
- Today's program editors are smart and can show you where you have syntax errors before you even run a program. Once you've used a modern editor, you'll wonder how you ever managed without one. There are a number of good programs available, but I have settled on Editra because it's free and available on macOS, Windows, and Linux/Unix.
- You can download a copy by visiting Editra's website and selecting the Download link at the top of the page, where you can also find a link to the documentation. Everyone has different programming styles and preferences, though, so if you don't get on with it, there are plenty more program editors available to choose from.

Integrated development environment (IDE)

- The popular phpDesigner IDE comes with a PHP program loaded into the main frame, and the righthand Code Explorer listing the various classes, functions, and variables that it uses.
- When developing with an IDE, you can set breakpoints and then run all (or portions) of your code, which will stop at the breakpoints and provide you with information about the program's current state. There are several IDEs available for different platforms, most of which are commercial, but there are some free ones too.