

# Installing Your Web Server on macOS

*(Please note that new macOS versions and new XAMPP versions may require modification of these instructions. You may be able to resolve these yourself or with help from your instructor. We will update these instructions on the textbook Web site whenever we learn of changes).*

## READY TO INSTALL?

The Web server must be installed from the Apache Friends site, but you must be careful to choose the correct installation since there are multiple options for macOS users.

### Option 1: ALL macOS (except CATALINA)

Go to <https://www.apachefriends.org/download.html>

**Download one of the NATIVE installations that runs directly on macOS:** this is the simplest approach and recommended for most students.

Once you have downloaded your installation file you can install XAMPP as follows:

Open the DMG-Image.

Double-click on the image to start the installation process.

That's all. XAMPP is now installed below the **/Applications/XAMPP** directory. Now skip down to "How do I start XAMPP?"

### Option 2: CATALINA users or others who prefer to install a VM

**To download and install the Web server on a Linux Virtual Machine:** some users may prefer to install the **VM** version that installs a Linux virtual machine (VM), and then installs the Web server there. **To install the latest VM version for macOS download the version, go to <https://www.apachefriends.org>** and click the download button for XAMPP for OSX (the download window should show a file name that ends with "vm.dmg").

**Instructions to install the VM version** can be found at [https://www.apachefriends.org/faq\\_stackman.html](https://www.apachefriends.org/faq_stackman.html)

## USING THE XAMPP WEBSERVER

### How do I start XAMPP?

To start XAMPP simply open XAMPP Control and start Apache, MySQL and ProFTPD. The name of the XAMPP Control is "**manager-osx**".

### How to test XAMPP

Now let's connect to the Web server from your Web browser. Start any browser of your choice and type the URL: **http://localhost**

A web page will be displayed with the message "Welcome to XAMPP" This Web page is being delivered to your Web browser by the Web server that you just installed and is now running on your computer.

**Congratulations!** You have now installed xampp and have successfully started your Web server and tested that it is working correctly.

### **How do I stop XAMPP?**

To stop XAMPP simply open XAMPP Control and stop the servers. The name of the XAMPP Control is "**manager-osx**". Just to show that the Web server is no longer running, try typing **http://localhost** again in your Web browser. You will be told this site can't be found or reached.

## **ADDING THE TEXTBOOK FILES AND FOLDERS TO YOUR WEB SERVER**

Now that you have your Web server installed you just need to add the folder that contains the files you will use with this textbook.

Download the file named **webtech.zip** from the textbook Web site. You can find this under the INSTALLATION section of the Students page:

**<https://mikeokane.com/textbooks/wbip/support.php>**

Unzip the webtech.zip file to obtain a folder named **webtech**. Move this folder and all its contents directly under the **htdocs** folder in your xampp installation. After you have done this, your webtech folder should be located at **Applications/XAMPP/htdocs/webtech**

## **TESTING THE TEXTBOOK FILES IN THE webtech FOLDER**

Now let's test that your webtech folder was installed correctly. Open your XAMPP Control Panel and start your web server again if it isn't already running. Now open any Web browser and this time type the URL: **http://localhost/webtech**

Now you should see a page with the title "**A Web-Based Introduction to Programming**". You will also see a link to "**Run files in the samples folder**". Click this link. You will see a list of all the files included in the samples folder; these are referenced throughout the textbook. Click the file named **add-two-numbers.html** and you will see a Web page that displays a form that asks for two numbers. Type in two numbers and click the "Tell me the sum" button. Another page will display showing the sum of the two numbers. You can take this approach to run any .html files in your samples folder. You can also click the "**Run files in the coursework folder**" link from the main webtech page to run files in the coursework folder (don't worry if these generate error messages, these are exercises that you must complete as you work through the book).

**Congratulations!** You have now added the webtech folder to your Web server and you are ready to start work!

**NOTE:** If you use Finder to look inside your webtech folder you will see that it actually contains two sub-folders: **coursework** and **samples**. The coursework folder contains chapter folders and this is where you will complete and test your chapter coding exercises. The samples folder contains all of the sample files that are used as examples throughout the textbook. See Chapter 2 in the textbook to learn how to use the Web server, and how to create, edit, save, and test your coursework.

## **ADDITIONAL NOTES:**

### **DISPLAYING PHP ERRORS**

In some OSX installations, php errors are disabled by default. To turn them on, go to **http://localhost/dashboard/phpinfo.php** and locate and note the file path for the setting that says

**Loaded Configuration File.** In most cases it will be `/Applications/XAMPP/xamppfiles/etc/php.ini` or similar. Navigate to the file in Finder and open in any text editor. Do a search for `display_errors=Off` and then change to `display_errors=On`. Save. You should now see php errors when you run a file with syntax errors.

**SECURITY.** XAMPP is not meant for production use but only for development environments. The way XAMPP is configured is to be open as possible to allow the developer anything he/she wants. For development environments this is great but in a production environment it could be fatal. **Here a list of missing security in XAMPP:**

The MySQL administrator (root) has no password.  
The MySQL daemon is accessible via network.  
ProFTPD uses the password "lampp" for user "daemon".  
PhpMyAdmin is accessible via network.

To fix most of the security weaknesses simply call the following command:

```
sudo /Applications/XAMPP/xamppfiles/xampp security
```

It will kick off a a small security check to make the XAMPP installation secure.

**ERROR MESSAGES. What is the meaning of the error messages I see when starting XAMPP?**

You may get several error messages while starting XAMPP:

LAMPP-Apache is already running.  
An Apache daemon is already running.  
The LAMPP startup script did not start XAMPP-Apache because there is an Apache instance already running. To start XAMPP properly, first you have to stop this daemon.  
LAMPP-MySQL is already running.  
A MySQL daemon is already running. This is mostly due to the same reasons as the above error. The LAMPP startup script found a MySQL daemon already running on your system. To start LAMPP properly, you have to stop this daemon first.

**Apache doesn't seem to start. What can I do?**

This error can exist for multiple reasons. Apache displays this error under several circumstances. To find the exact reason we have to do some research:

```
tail -2 /Applications/XAMPP/logs/error_log
```

If you get any error messages visit the apachefriends community pages for help.  
<https://www.apachefriends.org/community.html>

For more information, including how to make your XAMPP installation more secure, refer to:  
[https://www.apachefriends.org/faq\\_osx.html](https://www.apachefriends.org/faq_osx.html)

## **MYSQL**

In order to use MySQL with the textbook examples and exercises, you must first add the required tables and a user account. Instructions to do this are provided in the MySQL chapter of the textbook.