Installing Your Web Server on Windows

FIRST DECIDE WHERE YOU WANT TO INSTALL YOUR WEB SERVER: You can install xampp on your local hard drive or on a portable USB drive. If you want to just use it on a single computer, install xampp to your hard drive; if you want to to carry xampp with you so you can use it on multiple Windows computers (for example in computer labs), install it on a USB drive.

NOTE: If you have anti-virus software running the installation may take some time because there are a large number of small files that will be checked for viruses. You can speed up the installation by adding exceptions to your anti-virus software, see "How do I configure my antivirus application?" below.

READY TO INSTALL? Go to https://www.apachefriends.org/index.html and click the **XAMPP for Windows** button. The installer will download and you can run it to start the Setup Wizard which will install xampp (this may take 5 or 10 minutes, wait until you see the message that installation has completed). It's simplest to accept the default settings, but you can choose to change the drive letter for the installation folder if you want to install xampp on a USB drive instead of your hard drive (for example to the root of your selected drive, for example from **C:\xampp** to **E:\xampp** if that is where your USB is plugged in). If you install xampp on a USB drive instead of your hard drive you will be able to carry your Web server from computer to computer. See the “ADDITIONAL NOTES” section at the end of this document if you wish to install in a different folder than the root folder of a drive.

WAIT FOR THE INSTALLATION TO COMPLETE: Be sure to wait until the installation has completed before you test the server.

TEST YOUR XAMPP INSTALLATION: When the installation has completed you are ready to test that the installation was successful. Navigate to the xampp folder and double-click the file named **xampp-control.exe**. This will bring up the xampp control panel that you will use whenever you need to start, stop, or manage your xampp applications. Let's start the Apache Web server. Click the **Start** button to the **right** of **Apache** under **Actions**. The button should change to Stop and you will see a note in the message box that Apache is running. To test that the Web server is running, open any browser of your choice and type the URL: **http://localhost** The name localhost is the domain name of your local Web server. A web page should be displayed with the message "**Welcome to XAMPP for Windows**" **Congratulations, your Web server is alive and running!** You have now installed xampp and have successfully started your Web server and tested that it is working correctly.

STOPPING YOUR WEB SERVER AND QUITTING THE CONTROL PANEL: Whenever you finish using your server you must complete TWO steps:

1. First, go to the xampp Control Panel and click the **Stop** button next to any application that is running. For example if you click **Stop** next to **Apache** this will stop your Web server (the button will change from Stop to Start).

2. And second, when you have stopped all applications that were running, next click the **Quit** button on the lower right side of the Control Panel. This is important: always to remember to first stop any applications in the Control and then ALSO quit the Control Panel when you are done.

Just to prove that the Web server is no longer running, try typing **http://localhost** again in your Web browser. Now you will be told that this site can't be found or can't be 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 need to work through the textbook. These files can be downloaded from the textbook Web site:

https://www.mikeokane.com/textbooks/wbip

Be sure to choose your correct textbook edition under the Students menu, and then look under the “INSTALLING YOUR WEB SERVER” section for the link to download **webtech.zip**.

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. For example if your xampp location is located in **c:\xampp**, the webtech folder should be located at **c:\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 you Web server and you are ready to start work!

If you use File Explorer 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.

TO UNINSTALL xampp: If you installed xampp with the installer and wish to uninstall xampp, click uninstall.exe in your xampp folder. IMPORTANT: be sure to save your work (files, folders, databases) to another location before uninstalling. Otherwise, if you installed XAMPP using the ZIP and 7zip versions, shut down all XAMPP servers and exit all panels. If you installed any services, uninstall and shut them down too. Now simply delete the entire folder where XAMPP is installed. There are no registry entries and no environment variables to clean up.

ADDITIONAL NOTES

INSTALL XAMPP IN A SUB-FOLDER (READ THIS ONLY IF YOU WANT TO INSTALL TO A SUB-FOLDER ON YOUR HARD DRIVE): If you prefer to install under a sub-folder on your **hard drive**, for example, **C:\Users\Desktop\chris\xampp**, you can do that, you just need to complete an additional step. You may also receive two error messages at the end of the installation: the first message will indicate a problem running the post-install step, and the second will suggest you may need to install the Microsoft Visual C++ 2008 Redistribution package. **Don't be concerned with these messages**; after the install has completed, simply go to the xampp folder and run the **setup-xampp.bat** file. This will set the paths correctly and you should be able to run xampp with no problem. **IMPORTANT: You only need to run setup-xampp.bat if you installed in a sub-folder on your hard drive; DO NOT not run setup_xampp if you installed to a root drive, for example C:\xampp, or if you installed on a USB drive. NOTE**: Do **not** install under the **Program Files** folder on your hard drive since items under this folder are managed by your Windows User Account Control (UAC); if UAC is activated on your computer it may restrict some xampp functions (if you really want to install to C:\ Program Files, you will need to deactivate your UAC, using msconfig).

Setting file paths: If you installed XAMPP in a top level folder like "C:\" or "D:\", or at the root of a USB drive, you will not need to run the setup_xampp.bat file to be able to start your Apache or MySQL servers. If you installed on a USB drive and need to run setup_xampp.bat for any reason, be sure to choose relative paths in the setup script since different drive letters will apply when you insert the USB drive into different computers. You can switch from absolute to relative paths at any time with the setup script.

How do I configure my antivirus application? We have included all dependences and servers required for running the bundled web application, so you will find that XAMPP installs large numbers of files. If you are installing a XAMPP application on a Windows machine with an antivirus app enabled, this may slow down the installation significantly, and there is also a chance that one of the servers (web server, database server) may be blocked by the antivirus software. If you have an antivirus tool enabled, check the following settings for running XAMPP without performance issues:

Add exceptions in the firewall: for Apache, MySQL or any other server.
Scan files when executing: If you have enabled the antivirus scan for all files, the executable files for the servers may slow down.
Scan the traffic for different URLs: If you are developing with XAMPP on your own machine, you can exclude "localhost" traffic in the Antivirus settings.

Another way to start and stop your server: If you wish, you can also use some batchfiles to start/stop the servers:

Apache & MySQL start: \xampp\xampp_start.exe
Apache & MySQL stop: \xampp\xampp_stop.exe
Apache start: \xampp\apache_start.bat
Apache stop: \xampp\apache_stop.bat
MySQL start: \xampp\mysql_start.bat
MySQL stop: \xampp\mysql_stop.bat
Mercury Mailserver start: \xampp\mercury_start.bat
Mercury Mailserver stop: \xampp\mercury_stop.bat
FileZilla Server start: \xampp\filezilla_start.bat
FileZilla Server stop: \xampp\filezilla_stop.bat

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.
The XAMPP demopage is accessible via network.
The default users of Mercury and FileZilla are known.

All points can be a security risk, especially if XAMPP is accessible via network and people outside your LAN. It can also help to use a firewall or a (NAT) router. In case of a router or firewall, your PC is normally not accessible via network. It is up to you to fix these problems. As a small help there is the "XAMPP Security console". Please secure XAMPP before publishing anything online. A firewall or an external router are only sufficient for low levels of security. For slightly more security, you can run the "XAMPP Security console" and assign passwords. If you want have your XAMPP accessible from the internet, you should go to the following URI which can fix some problems:

http://localhost/security/

With the security console you can set a password for the MySQL user "root" and phpMyAdmin. You can also enable a authentication for the XAMPP demopages. This web based tool does not fix any additional security issues! Especially the FileZilla FTP server and the Mercury mail server you must secure yourself.

TROUBLESHOOTING YOUR INSTALLATION

Why doesn't the Apache server start on my system? This problem can be one of several reasons:

You have started more then one HTTP Server (IIS, Sambar, ZEUS and so on). Only one Server can use port 80. This error message indicate the problem:

(OS 10048)... make_sock: could not bind to adress 0.0.0.0:80
no listening sockets available, shutting down

You have other software, such as the Internet Telephone "Skype" which also blocks the port 80. If the problem is "Skype", you can go in Skype to Actions --> Options --> Connection --> remove the check mark at "use port 80 for an alternate port" and restart Skype. Now it should work.

You have a firewall which blocks the Apache port. Not all firewalls are compatible with Apache, and sometimes deactivating the firewall is not enough and you must deinstall it. This error message indicates a firewall:

(OS 10038)Socket operation on non-socket: make_sock: for address 0.0.0.0:80, apr_socket_opt_set: (SO_KEEPALIVE)

Also if Apache can start, but your browser can't connect to it it could be due to one of the following:

Some virus scanners can cause this in the same way that firewalls can interfere.
You have XP Professional without service pack 1. You must have at least SP1 for XAMPP.

Tip: If you have problems with used ports, you can try the tool "xampp-portcheck.exe". Maybe it can help.

How can I get XAMPP working on port 80 under Windows 10?

By default, Windows 10 starts Microsoft IIS on port 80, which is the same default port used by Apache in XAMPP. As a result, Apache cannot bind to port 80.

To disable IIS from running on port 80, follow these steps:

Open the Services panel in Computer Management.
Search for the 'World Wide Web Publishing Service' and select it.
Click the link to 'Stop the service'.
Double-click the service name.
In the 'Startup type' field, change the startup type to 'Disabled'.
Click 'OK' to save your changes.

You should now be able to start Apache in XAMPP on port 80.

For more information, refer to: **https://www.apachefriends.org/faq_windows.html**