

## Setting Up a Local Development Server

As you may know, WordPress is an application that runs on a server. Visitors to our site will connect to our server using their computers/web browsers and our WordPress application will deliver the requested web page or other content.

In this course, we'll use a free development server called **MAMP**. MAMP allows us to run a server on our own computer to develop and test our WordPress applications before publishing them to the web. Once we've developed a stable version of our site, we can upload it to a production server to make it available to the world.

The MAMP program comes with the following:

- An **Apache** server for running **PHP** programs.
- A **MySQL** database management system for creating databases, storing data, and modifying data.
- **phpMyAdmin**, which is a dashboard that provides a visual user interface for working with your databases.

This document includes instructions on how to set up MAMP in a few different environments, including the lab computers in B014 and your own laptop computer.

**Important:** while you're free to use your own laptop computer in this course, I will generally NOT be able to provide tech support for issues related to your hardware and operating system. I'll do my best to help, but if we can't make it work, you may have to use a computer in B014 instead. Furthermore, all work you submit must run properly on the computers in B014. (I recommend that you test major assignments and projects in this environment before submitting for grading.)

**Another important thing:** students who choose to use a lab computer in B014 will have to use the same computer throughout the semester. So, if you sit at a workstation that another student usually uses, I may ask you to move. ***I think the easiest thing to do is just choose one workstation in the lab and stick with it, even if you're using your own laptop.***

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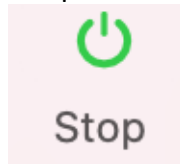
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## 1. Installing in the Langara Mac Lab, B014

- **Important:** There are a few quirks to using MAMP in a Langara Mac lab that you should be aware of:
  - Please choose **ONE** computer and use that computer throughout the *entire term*. Things get complicated if two students try to install MAMP on the same computer.
  - The files associated with your MAMP installation (including your assignments, projects, and exam files) may be accessible to other students who use this computer. For security, I ***strongly recommend*** that you do the following each time you work in the lab:
    - Before logging out, copy the folder **/Applications/MAMP/htdocs** to a portable drive, then delete the contents of htdocs from the lab computer.
    - After logging in, copy the files from your portable drive back to htdocs on the lab computer.
    - To be safe, keep multiple backups of all your files.
- Login to a computer and open the **Self Service Langara College** application. You can do this by pressing **command + spacebar** on the keyboard, typing "**self service**" into the search bar that appears, and clicking on the app icon to launch it.
- In the **Self Service** application, choose **WMDD** from the side menu.
- Click **Install (or Reinstall) MAMP 6.X** (where the X refers to the most recent version)
  - Follow the on-screen prompts. It may take a few minutes for the application to be installed.
  - Following successful installation, you can start the application by double clicking the **MAMP** application icon in the folder **Applications/MAMP**
    - **Important:** After installing MAMP and trying to start it, you may get a popup message asking you to enter administrator credentials. If this happens, do the following:
      - Click "cancel" on the message
      - shut down MAMP
      - In the Self Service application, run Uninstall MAMP
      - Repeat the installation instructions.

The software should work now, but if it doesn't, let me know!

- Click the **Start** button in the top-right corner of the application window. When the application is running, you should see a green On/Off button above the word "stop".



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- If you run into errors while doing this, open **Activity Monitor** and quit all **mysqld** and **httpd** processes. You may have to restart your computer and try again.
- Congratulations! Your server is running at the URL **http://localhost:8888**. Note that this URL is not accessible on the internet; it's only meant for development and testing on your local computer.

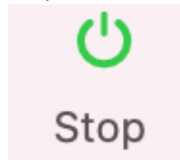
You should have a MAMP folder on your computer at **Applications/MAMP**. In this folder, you will find a folder called **htdocs**. Any PHP script placed in **htdocs** can be run with output viewed in the browser. For example, a script at **Applications/MAMP/htdocs/foldername/filename.php** could be run in the browser by navigating to **http://localhost:8888/foldername/filename.php**. To test this, try to create and run a file called **test.php** with the following code: `<?php echo "<h1>Hello PHP!</h1>"; ?>`

## 2. Installing On Your Own Computer, MacOS

- **Important note:** the installer may try to get you to install **MAMP PRO** and **NANO DNS**. You don't need these and don't have to install them! If MAMP PRO is installed automatically, feel free to uninstall it.
- Download and install MAMP on your computer. You can use the following tutorials to get MAMP set up on your computer:

- <https://documentation.mamp.info/en/MAMP-Mac/Installation/>

- Please follow the **New Installation** part of the tutorial and install version **6.X**, where X is the most recent version. (At the time I write this, it's **6.8**.) You will have to choose either the **Intel** or **Apple** version depending on what kind of processor your computer has. (Ask me if you're not sure; newer computers will have the **Apple M1/M2** CPU.) If all is successful, you should see the MAMP panel with a green On/Off button above the word "stop".



- You may also find the **First Steps** article helpful: <https://documentation.mamp.info/en/MAMP-Mac/First-Steps/index.html>
- When I tried to install MAMP on my computer I ran into a few conflicts that I had to resolve first. If you get an error saying you can't continue with the installation, try the following:
  - Open **Activity Monitor** and quit all **mysqld** and **httpd** processes. You may have to restart your computer.
- Congratulations! Your server is running at the URL **http://localhost:8888**. Note that this URL is not accessible on the internet; it's only meant for development and testing on your local computer .

You should have a MAMP folder on your computer at **Applications/MAMP**. In this folder, you will find a folder called **htdocs**. Any PHP script placed in **htdocs** can be run with output viewed in the browser. For example, a script at **Applications/MAMP/htdocs/foldername/filename.php** could be run in the browser by navigating to **http://localhost:8888/foldername/filename.php**. To test this, try to create and run a file called **test.php** with the following code:


```
<?php echo "<h1>Hello PHP!</h1>"; ?>
```


- Go to step **4** in this tutorial for additional configuration instructions.

### 3. Installing On Your Own Computer, Windows

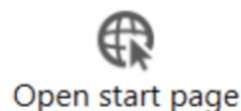
- **Important note:** the installer may try to get you to install **MAMP PRO** and **NANO DNS**. You don't need these and don't have to install them! If MAMP PRO is installed automatically, feel free to uninstall it.
- **Another note:** I don't have a Windows PC and therefore haven't been able to test this environment, so please contact me if you run into any problems. We can figure out how to resolve them together.
- Download and install MAMP on your computer. You can use the following tutorials to get MAMP set up on your computer:

- <https://documentation.mamp.info/en/MAMP-Windows/Installation/>
  - Please follow the **New Installation** parts of the tutorial. If all is successful, you should see the MAMP panel with little green boxes next to "Apache Server" and "MySQL Server".

Apache Server 

MySQL Server 

- You may also find the **First Steps** article helpful:  
<https://documentation.mamp.info/en/MAMP-Windows/First-Steps/index.html>
- Congratulations! Your server is running. The URL for accessing applications on your server will vary depending on your configuration. To find the URL, in the MAMP application click the "**Open start page**" or "**Open webstart page**" button.



This will open the MAMP page for your server in the browser. Check the URL: it should look something like this:

- <http://localhost/MAMP>
- <http://localhost:8888/MAMP>
- <http://localhost:80/MAMP>
- <http://localhost:8000/MAMP>
- Etc.

Make a note of the format of the URL; if you remove "MAMP" from that URL, you will get the URL that you'll use to access applications running on your server. From now on, I'll refer to it as **<your URL>**

Note that this URL is not accessible on the internet; it's only meant for development and testing on your local computer.

You should have a MAMP folder on your computer at **C:\MAMP**. On this folder, you will find a folder called **htdocs**. Any PHP script placed in **htdocs** can be run with output viewed in the browser. For example, a script at

**C:\MAMP\htdocs\foldername\filename.php** could be run in the browser by navigating to **<your URL>/foldername/filename.php**. To test this, try to create and run a file called **test.php** with the following code:

```
<?php echo "<h1>Hello PHP!</h1>"; ?>
```

- Go to step **4** in this tutorial for additional configuration instructions.

## 4. Configuring Error Reporting and Caching on Your Own Computer, Mac and Windows

- To make things easier, we're going to reconfigure PHP to show parsing errors in our code and disable caching. This only has to be done if you're working with MAMP on your own computer using Windows or macOS:
- Find the **php.ini** files in the following locations:

- MAMP/conf/php<version-number>/php.ini
- MAMP/bin/php/php<version-number>/conf/php.ini (if you're using Windows, you may not see this file. In that case, don't worry about it!)

**Note:** You can find the version number on the MAMP start page (the page that opens when you start MAMP) by going to **phpInfo** or **Tools > phpInfo**.

To be safe, make copies of these files and name them **php-BACKUP.ini**. That way you can easily revert to the originals if needed.

Once you've done that, open the above files in a code editor.

- For both of the above files, find the line

**display\_errors = Off**

and change it to

**display\_errors = On**

and then save the files.

- For both of the above files, find line

**;opcache.enable=1**

and change it to

**opcache.enable=0**

(note that we've removed the semi-colon from the start of the line.) Then save the files.

- Stop MAMP and start it again.