

Homework#2: C/S Architecture

Submit Assignment

Due Tuesday by 11:59pm **Points** 10 **Submitting** a text entry box

Available Feb 10 at 1pm - Feb 18 at 11:59pm 8 days

This homework will guide you through how to set up the server end for further development by using a client-server architecture.

Back End

Normally, a back end includes a web server, a database server, and an interpreter for the PHP language. In this class, we recommend Apache web server and MySQL database server. Although you can install and configure these components individually, that can be tedious and error prone. As a result, we recommend using the XAMPP package to simplify the installation of Apache, MySQL and PHP.

The URL for downloading XAMPP is,

<https://www.apachefriends.org/index.html> [\(https://www.apachefriends.org/index.html\)](https://www.apachefriends.org/index.html)

After you download the executable file (depending on your OS version) use a file manager to start the installer by double-click on it. You can accept most of the defaults that should install XAMPP into \xampp directory on your hard drive.

The XAMPP package includes the Apache web server, the MySQL database server, the PHP interpreter, and other software/tools that's useful for developing PHP applications.

Once you have installed XAMPP, you can test that installation by starting and stopping the Apache and MySQL servers shown in Figure 1.

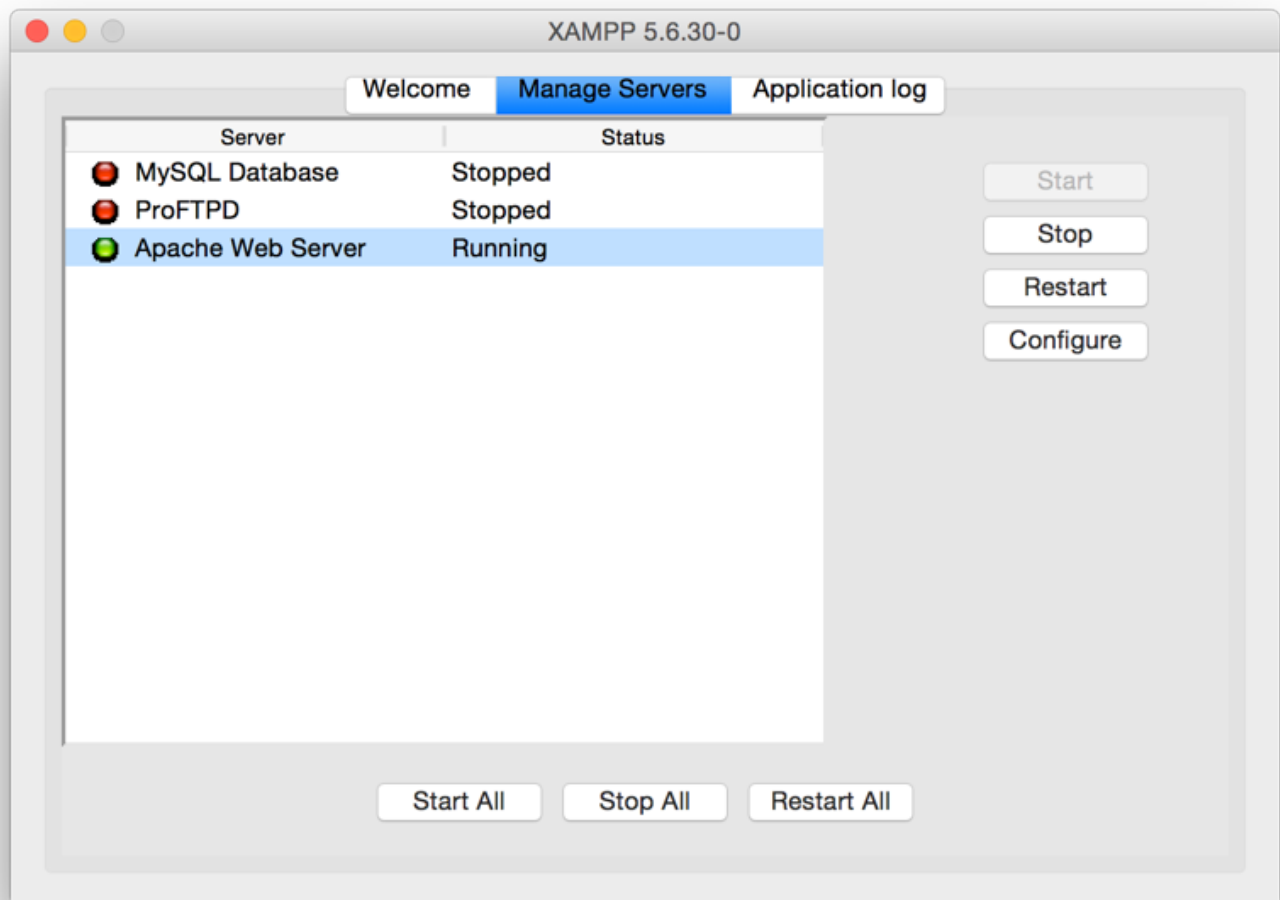


Figure 1. Running XAMPP

Open a web browser and enter this URL to test the server as Figure 2 shows,

<http://localhost> <http://localhost/>

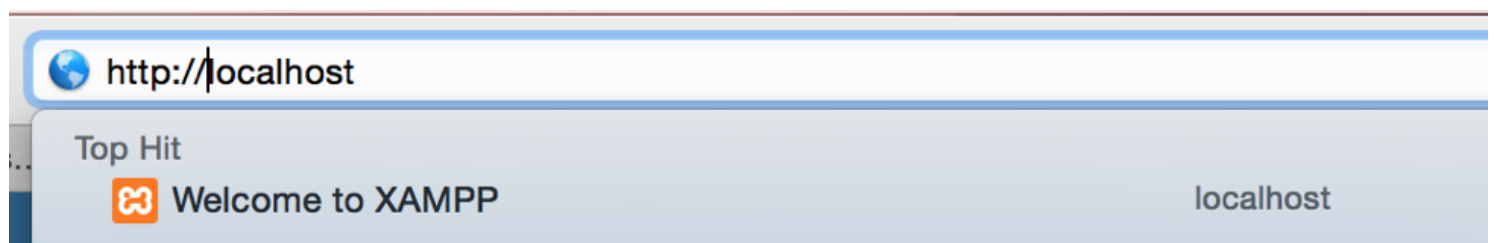
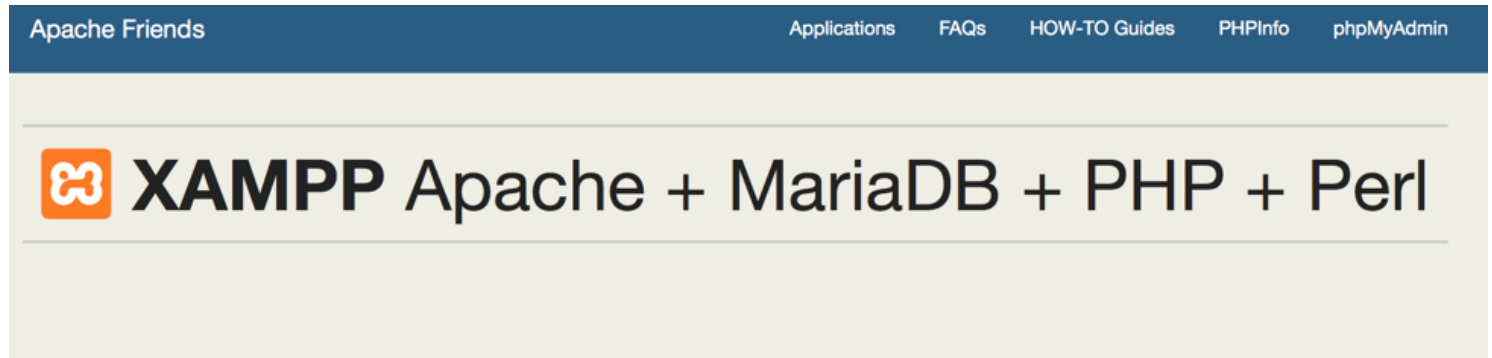


Figure 2. Verify XAMPP

If this URL displays a web page like Figure 3, you have successfully installed and started the Apache server. By default, this page displays a page that provides some additional information about XAMPP. The service uses port 80 by default.



Welcome to XAMPP for OS X 5.6.30

You have successfully installed XAMPP on this system! Now you can start using Apache, MariaDB, PHP and other components. You can find more info in the [FAQs](#) section or check the [HOW-TO Guides](#) for getting started with PHP applications.

Start the XAMPP Control Panel to check the server status.

Community

XAMPP has been around for more than 10 years – there is a huge community behind it. You can get involved by joining our [Forums](#), adding yourself to the [Mailing List](#), and liking us on [Facebook](#), following our exploits on [Twitter](#), or adding us to your [Google+](#) circles.

Contribute to XAMPP translation at translate.apachefriends.org.

Can you help translate XAMPP for other community members? We need your help to translate XAMPP into different languages. We have set up a site, translate.apachefriends.org, where users can contribute translations.

Figure 3. XAMPP Welcome Page

Finally, create a PHP page to accept data from the front end and echo “Total employee” back to the front end.

Front End

First, you can use either HTML+JavaScript or PHP to implement a page like this,

Add an Employee

First Name
TestFirst

Last Name
TestLas

Department
IT

Submit →

Employee Added

Name: TestLas, TestFirst
Department: IT
Employee ID: 00004905
Hire Date: Mon Feb 03 2020
Total Employees: 1

Figure 4. Front End

Then, here are the tasks you will need to perform in JavaScript or PHP:

- Create a global array to store all employees as you add them. I would name it 'employees', but that is really up to you.

- Create an employeeid variable and store a randomly generated 8 digit employee id number. Make sure the id number is unique.
- Add an employeeid property to your employee object and set its value to your employeeid variable.
- Make the employee object as a JSON object and send it to the back end as a JSON object.
- Add each newly created employee to your employees array (check duplicate before adding).
- Just so you can debug things easier, use console.log to output your employees array to the console after creating a new employee.
- Display the employee in the output HTML.
- Add one last line to your message that will display the total number of employees that have been added to your array.
- At the bottom of the form add a browser icon detected by your code to show which browser the user is currently using.
- Once you are done with HTML, CSS, JavaScript, and/or PHP, upload your code to a GitHub repository. Make sure the repository is public so that I can review your code.
- Take the HTML, CSS, and JavaScript or PHP from your completed work in your GitHub repository and upload them to you're a public accessible website*.
- Submit the URL of your GitHub repository where your working code can be found.
- Submit the URL of your publicly accessible website*.

You can use online IDE tools such as JSBin to edit some code, but then you will take that code and post it to your publicly accessible web server. Follow these instructions carefully and you should be able to easily get this assignment completed. Completion of steps marked with a “*” meet the criteria of “shows creativity, and a desire to excel above and beyond” in the course syllabus.

You will be graded according to the criteria. Be sure to look over this form carefully to make sure you have met all of the criteria.

Grading Rubrics

Criteria	Pts
Set up both front end and back end for running this assignment	1 pts
HTML elements properly added (No mix with other types of code)	1 pts

Use progressive development where other code are added in separate files. 1 pts

Item 1 to 9 .7 pt each

Public URL submitted from student website where working code is found .7 pts

Total Points: 10