PaySmith

Product Demo Video Script

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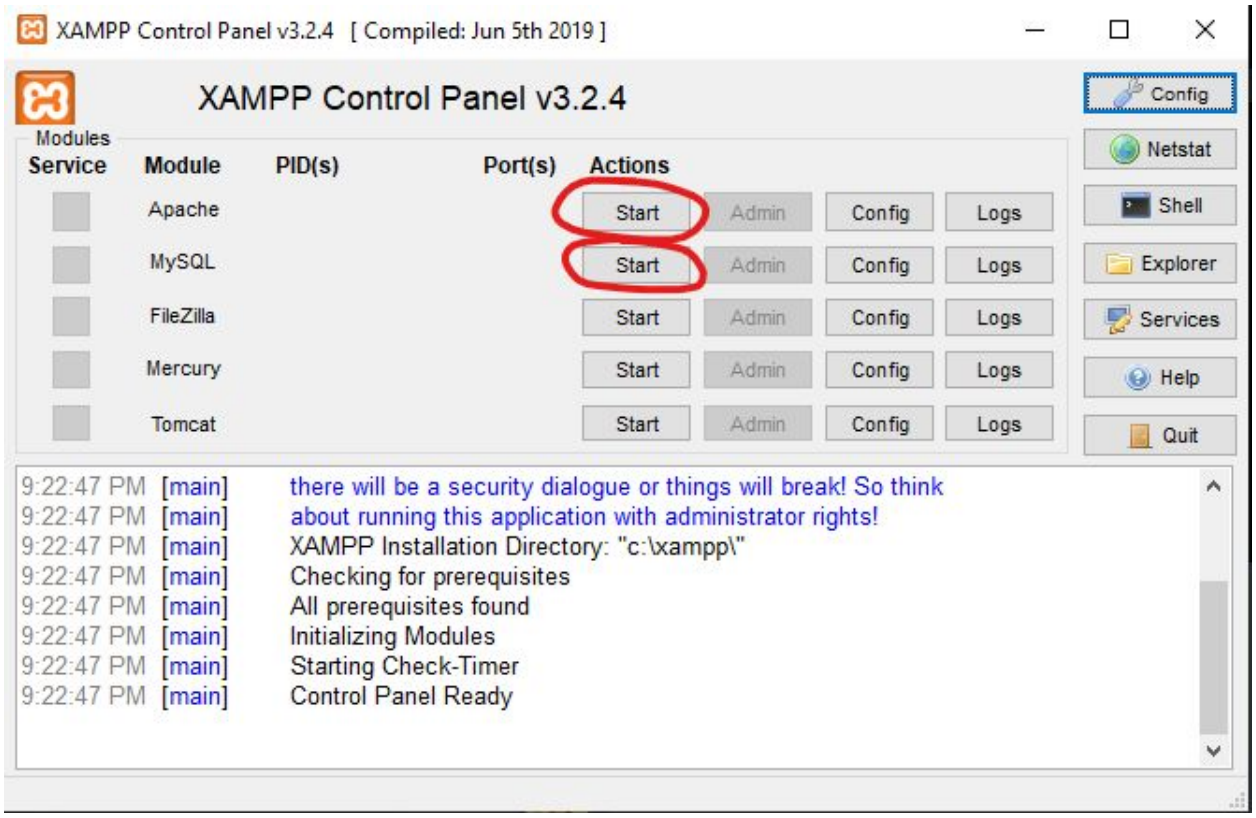
Video Link: https://youtu.be/MGItabjZ_HE

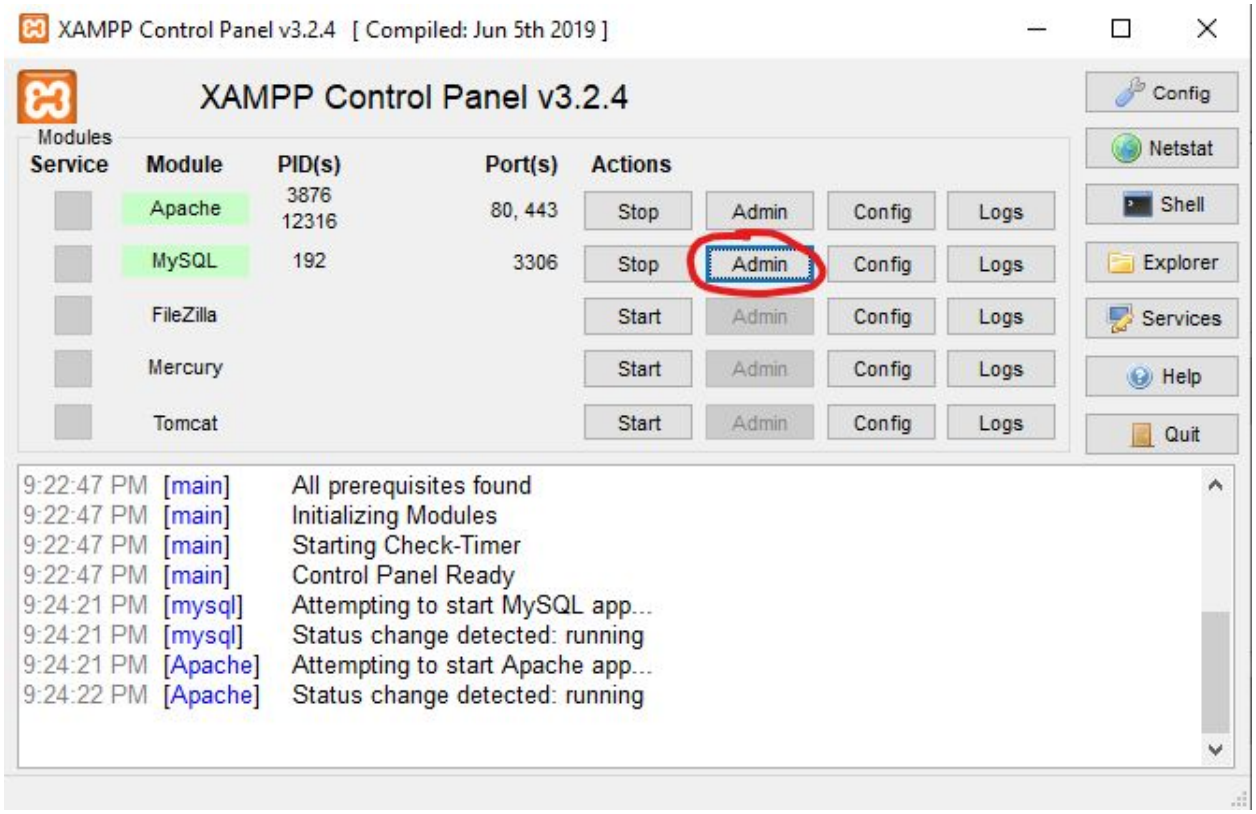
Accessing the Site

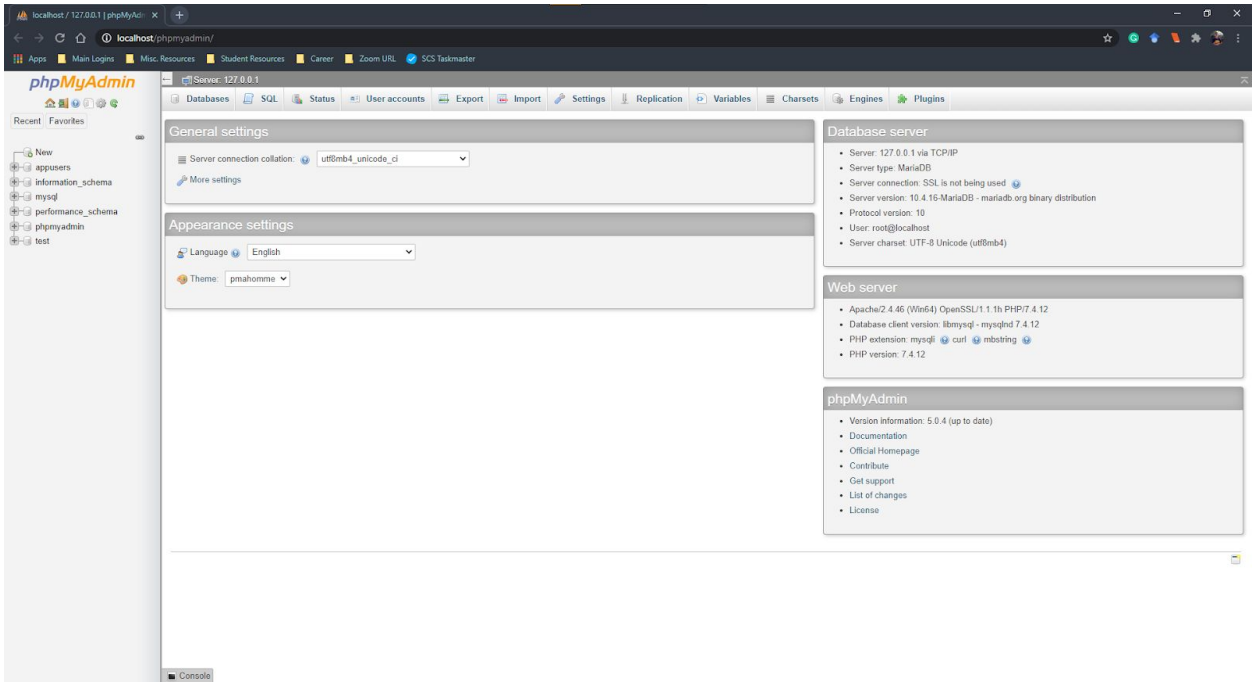
Below are some instructions after getting started on XAMPP with the help of the product documentation in the ZIP.

Open XAMPP and hit start on Apache and MySQL as shown below:

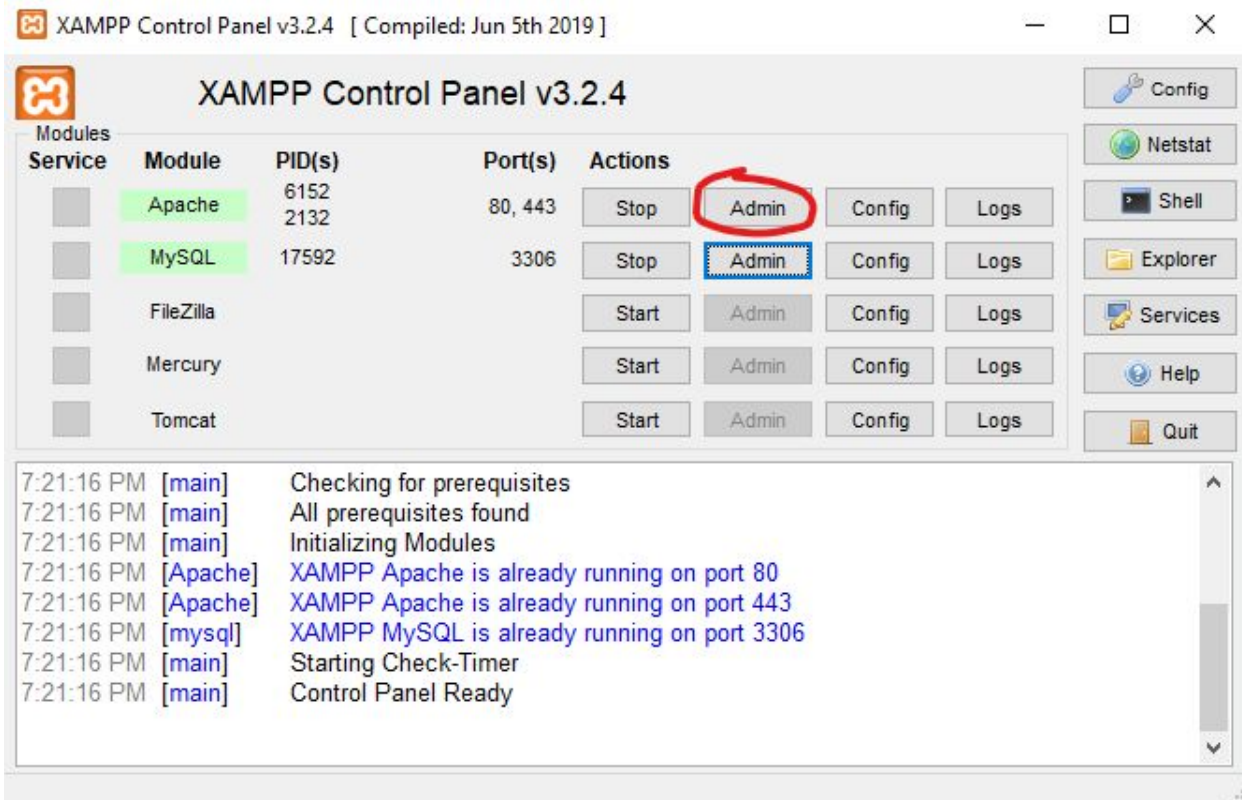


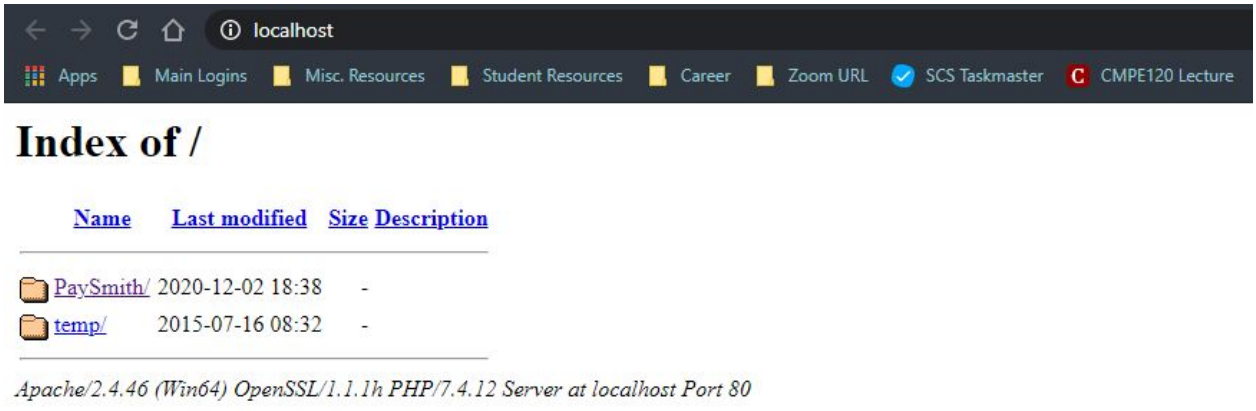
Click the Admin button corresponding to MySQL and you will able to see your local database as shown below:



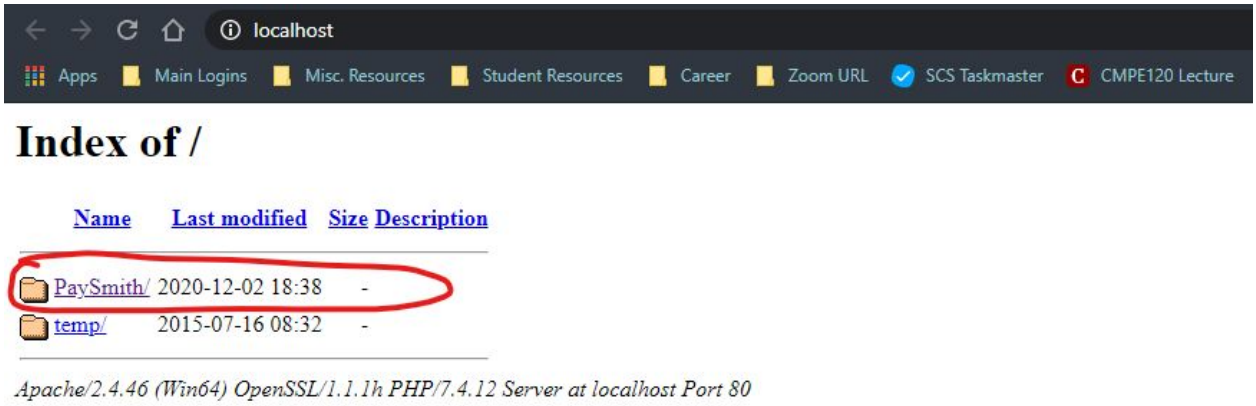


Click on the Admin button corresponding to Apache and you will see the screen you will need to access Paysmith:

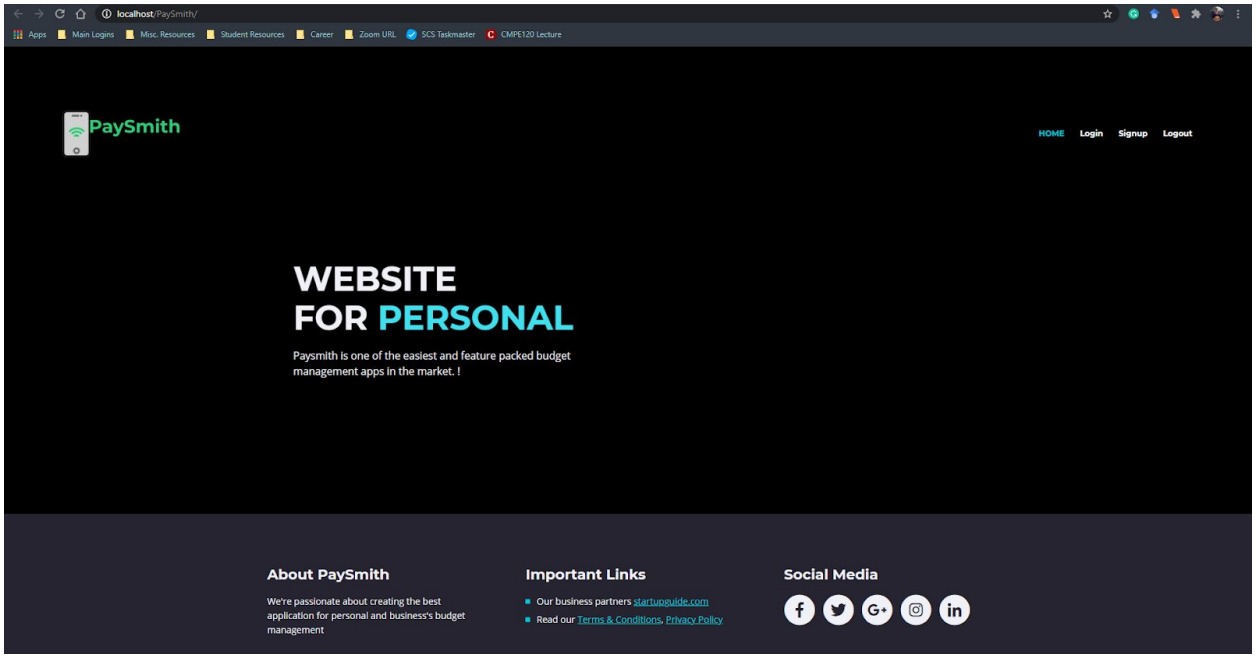




Click on the PaySmith folder as shown below:



Congrats! You are now running PaySmith on Windows!



Sign Up Procedure - Hung Nguyen

For sign-up, we have to fill out all the requirement info such as first name, last name, email, and password. If the user does not fill in all the fields, the system will print “Please fill out this field”. Once all your inputs are valid, your information will be saved in the database and the login page is opened.

Login/Logout Procedure - Bolang Yu

For login, the required information is the username and password. If the username and the password matches, there will pop a congratulation message saying “Welcome” in the top left hand corner of the screen, Otherwise, a popup error message identifying the problem will occur. These problems include either the wrong password or an invalid username. For logout, we only need to click on the logout button and then the login screen will load.

Functions of the Site - Michael Piccerillo

Now that you know how to access the site and can log in and out, we’ll go into the features and functionality of the site. The site has three main functions:transactions, transaction reports, and crowdfunding.

Transactions

Under the transactions view, I can see exactly where I have sent my money to and see where I am getting some money from. Positive values are associated with confirmed expenses, while we can also use negative values to know how we are paying off those expenses. We made it in a way which was simple and easy for everyone to understand, so I can very clearly see what I’ve bought and where I’ve spent that money, as well as how much I am receiving and where that money is coming from.

Transaction Reports

Under the transaction reports, I can view a list of transactions that took place between specific dates. I can view reports that occurred between certain days, months, and even years. However, there is little data that can translate between years, unless you can recall certain expenses that took place at least a year back from the current date. This can be useful if you want to track an overall trend between certain dates, if you wanted to compare trends between certain periods of time.

Crowdfunds

With crowdfunding, I can access the menu on the left hand side of the dashboard to see the crowdfunds options and that I can add one or edit/delete the list of crowdfund donations that I have. I can also add a description if I wanted to make a different organization system to this crowdfund section. I also have the ability to see what others have said and how much they have given for the cause under a specific nomenclature scheme with this section of the site.

This function could also be used for my close friends and I to use. If we're planning a surprise birthday for one of our buddies, we can create a crowdfund in secret and raise money in order to throw a party for the ages, at least, in our memory.

The Technical Side Of Things - Diego Cruz

Why A Full Implementation Was Not Possible

The main factor that determined the low feasibility of a full implementation that would involve actual transactions between bank accounts and other financial transactions were related to the security concerns that were raised with both a remote server-based implementation and a local host implementation. These two methods offered different advantages, but had their own unique set of security concerns that will be outlined in the next few statements.

Security Concerns

With a remote server-based implementation, the main problem lied in the fact that there would be no practical way for the beta tester to access the database and remove their data (bank account numbers, routing numbers, card numbers, and CVVs) from the database when they were done testing the product. And, that the responsibility would instead be placed on the developer team to remove this sensitive data from the remote server. However, due to obvious ethical concerns regarding whether the developer team should have access to such sensitive information, the team instead elected to optimize the software for a local server implementation.

With a local host-based implementation, the ability of the beta tester to access the database would no longer be an issue, since they would be able to delete the files from the database itself as well as uninstall the database hosting software XAMPP. However, this brought a new security question into light, regarding the very use of sensitive data like bank account numbers, routing numbers, card numbers, and CVVs. If the user does not delete the details of the

local database, and the corresponding files related to the package and XAMPP, they run the risk of having sensitive data on their machine which could be copied by malware and exploited. Additionally, if the user already has malware on their machine, regardless of whether it is the kind that copies files with certain characteristics or records keystrokes, if the user were to input their sensitive financial information, that would put it at risk. This meant that the transaction functions related to active financial transactions (pay/request) would have security concerns that could not reliably be addressed before the release of this beta.

So, in this version of the beta, the transfer function only logs transactions between the user and others based on what the user inputs as the transaction amount, without actually manipulating the balances of bank accounts between the two parties. While this makes it more of a native financial tracking software since there are no transactions taking place in the forms of user-to-user and user-to-crowdfund, we chose to make that compromise for the sake of the security of those who will beta test the product.

What We Learned - The Whole Dev Team

From a technical standpoint, the team learned about the PHP programming language as well as the XAMPP PHP developer environment. We learned of some of the conventions that are expected of software development, especially with regards to the documentation, design, testing, and security of the software developed. In terms of documentation, it is important to clearly define the aims and objectives of the software, in such a way that each member of the developer team understands the majority of that content with only minor questions to ask. And, to set reasonable expectations for the software to be developed, as we ran into some important concerns regarding the security of the information of users (as described in the sections above).

The developer team ran into these problems about three months into development, and the last two months were spent finding a solution in the implementation, which we chose to run a local host implementation that can work without specific information like bank account numbers, routing numbers, card numbers, and CVVs.

From a professional standpoint, we learned of some of the more valid concerns that can come with developing a software that is designed to access sensitive information and make interactions between users that use this information. We also became more familiar with the agile workflow, as well as how an individual member of a developer team could be important for wearing multiple hats in developing a program, whether that be for driving, scribing, or creating the corresponding documentation to help with testing and releasing the source code. It also helps that a member of the team can take charge and help with these kinds of tasks, such that they can work together with a senior/supervisor at the workplace to be able to report the progress of the team, and whether the team needs assistance with some sort of challenge that occurs during development.

PostScript

In order to view the work done during the demo, you are free to do so after importing the “appusers.sql” file, using the sign-in details provided in the database.