3. Build Instructions

We are assuming that the corresponding user has sufficient knowledge of starting a web-server[1], database server[2] and other non-project configurations such as dns/domain configurations.

The project consists of two main parts to be built: The web application, whose source code is in the *main* branch of the project git repository, and the database, whose backup is in the *database* branch of the repository.

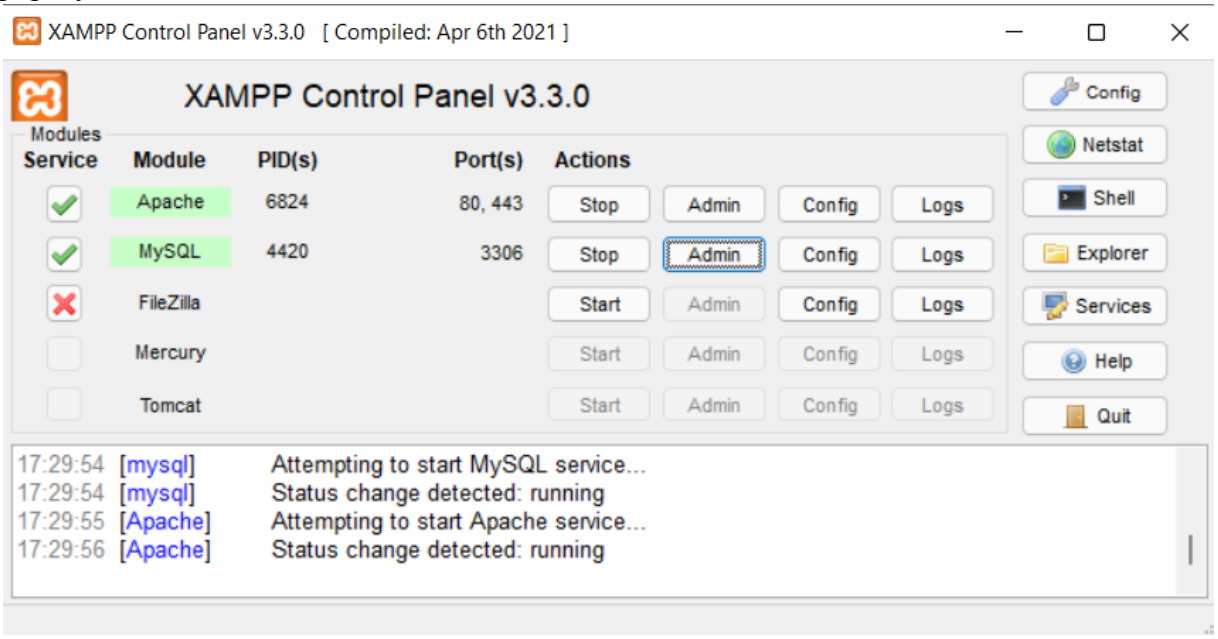
For the development purposes it is suggested to use XAMPP by Apache Friends which includes the Apache web server, MariaDB Database Management System, PHP 8.0.* interpreter, and phpMyAdmin 5.1.* MariaDB administration tool which is "a portable web application". The version 8.0.* XAMPP is suggested to be used for its portability and ease of use. The rest of the instruction assumes you're using XAMPP. If you don't you should complete those steps in the means you prefered (from the terminal or an IDE etc.)

Setting up Database and Database Engine

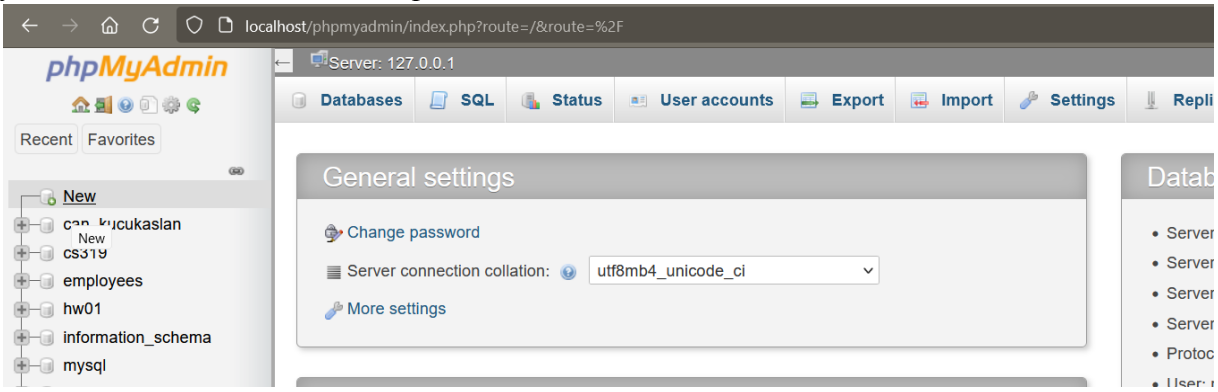
If you're using the XAMPP, simply start both Apache and MySQL

[1] specifically apache 2.4+
[2] specifically MariaDB 10.4+

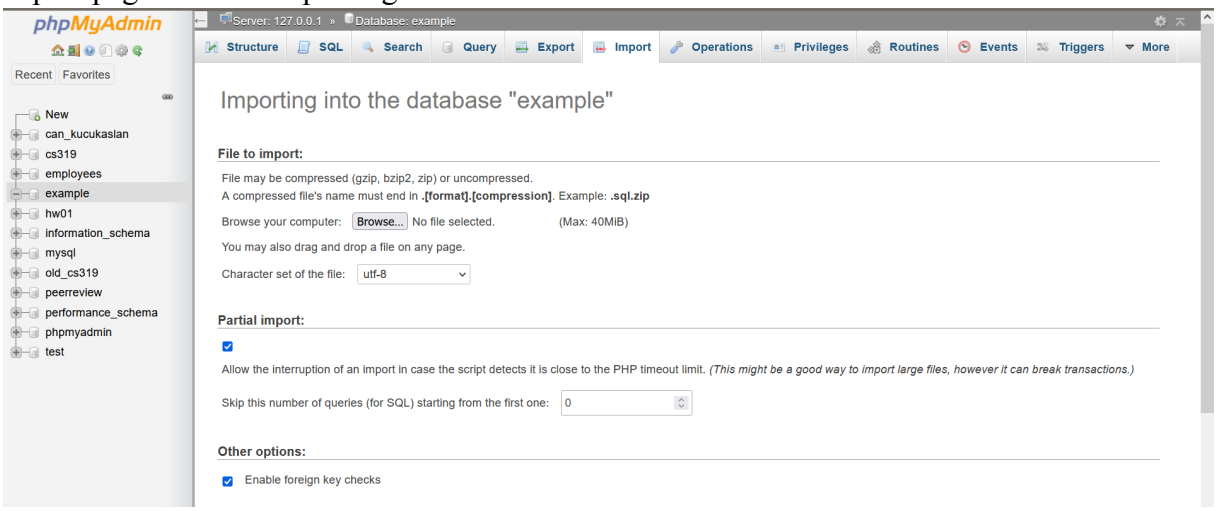
1. Click *Admin* button of MySQL to open the web based Database Management System phpMyAdmin



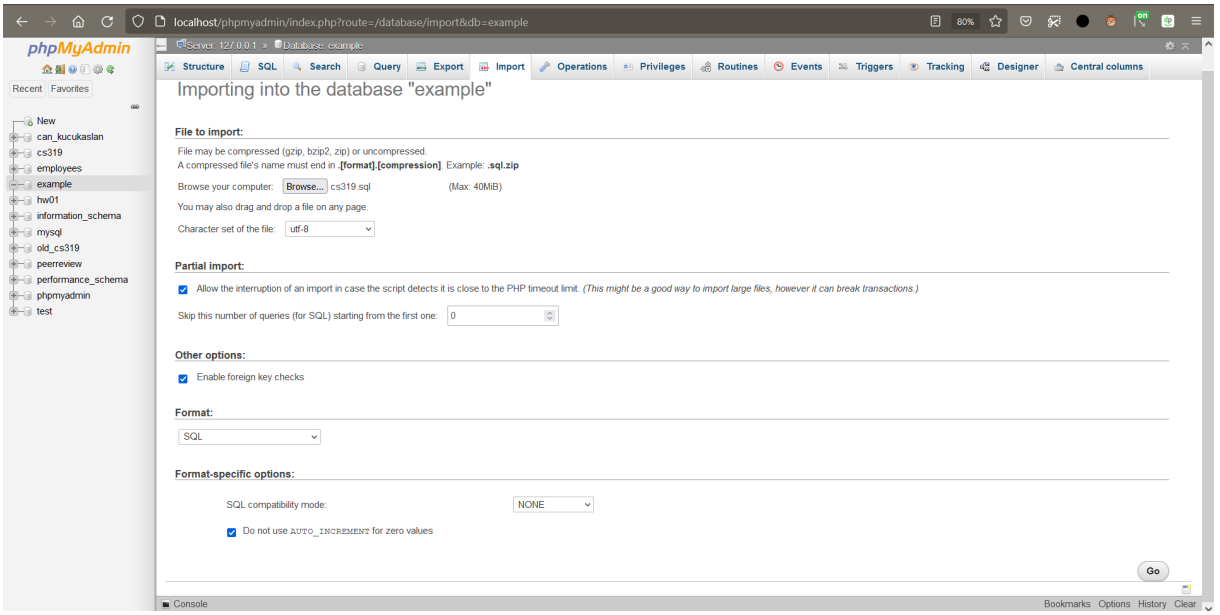
2. Login to phpMyAdmin using the credentials (if you did not set any credentials default username is *root* and the password is empty. You should normally set a password or create other user accounts for a more secure environment (as we did in the project) but they are beyond this instruction.
3. Create a database using the new button in left navigation menu, we will assume that you named the database as *example*



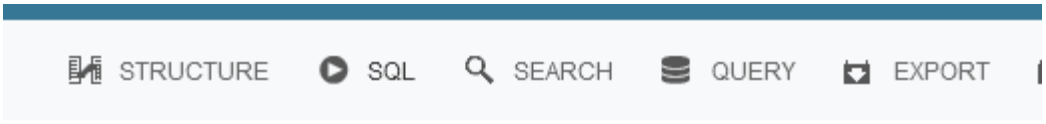
4. Now choose newly created database *example* from left navigation menu, then open import page from the top navigation menu

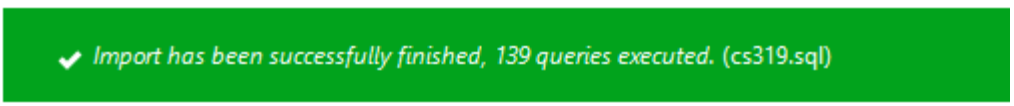


5. Choose *cs319.sql* (with dummy data) or *cs319_structure.sql* (no dummy data) file which are located in the *database* branch of the git repository. Then press the go button located at the bottom right.



6. Hopefully, you will be informed that the import process was successful.

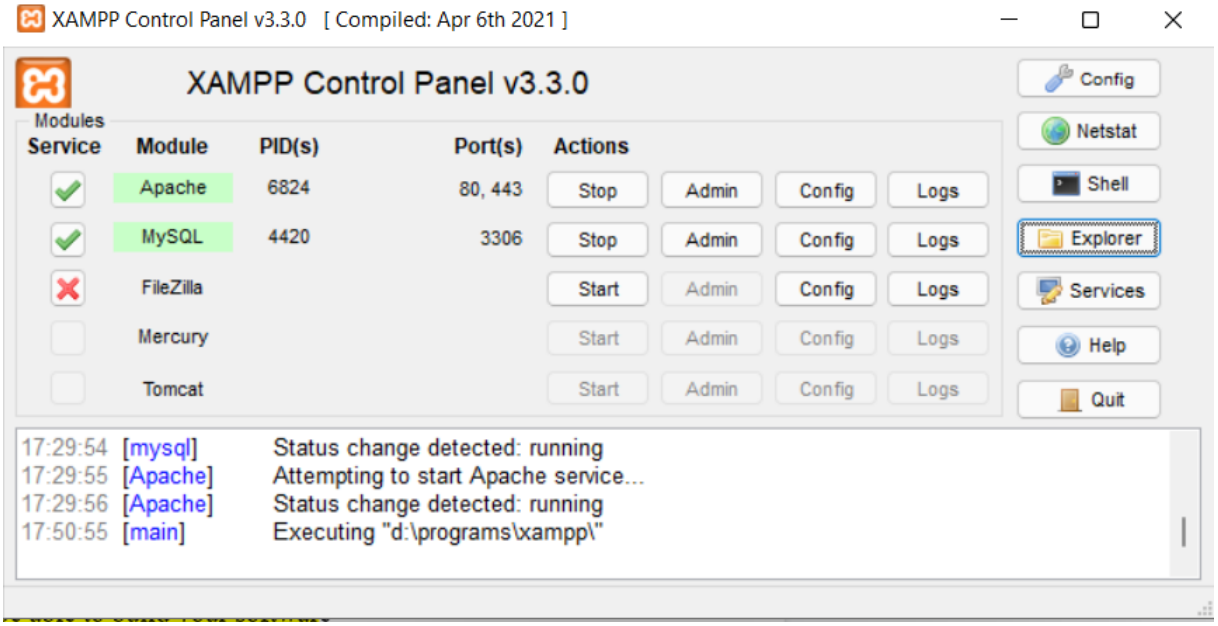




Setting up the Web-Server

7. In step 1. we already started the web-server but it does not run our code. Optionally you can verify that the server is started by clicking the *Admin* button of Apache.

8. Click the *Explorer* button at the right hand side of *XAMPP Control Panel*



9. It will open the root directory of XAMPP. Open the *htdocs* directory and delete everything inside the *htdocs* directory.
10. Now clone the main branch of the git repository into *htdocs* directory. Although it would be more copying the content of the repository rather than cloning since otherwise the git files will also be included in the *htdocs* directory; it won't affect the functionality of the program.
11. Now we should configure the database connections of the server. We have provided a *sample_constants.php* file in the main branch where the server name, and database credentials should be defined. First rename it to *constants.php.*
12. The *constants.php* file now contains default database name, username, password, servername etc. If you did not change/set any of them then the application should be running in localhost. Otherwise edit the *constants.php* according to changes/credentials. For example
    a. if you used another name for the database then use that database name.
    b. if you created a user (or set a password) use these credentials, and be sure that the user account is granted full access to that database you created in *Setting up Database and Database Engine.*
13. The server and the database is ready, the only thing remaining is installing the PHP dependencies. For this purpose we need to download composer from the https://getcomposer.org/ . After the installation, open the command line (cmd.exe or terminal) and open the *htdocs* directory. Then run `composer update` or `php composer.phar update` command (depending on your preference) to install and update the dependencies.
14. Finally, now, you can go to the *localhost* in a browser and start using the app.