

Introduction:

The basic application is an Android App created in Android Studios using Java.

The app connects to a database via a server using PHP scripts.

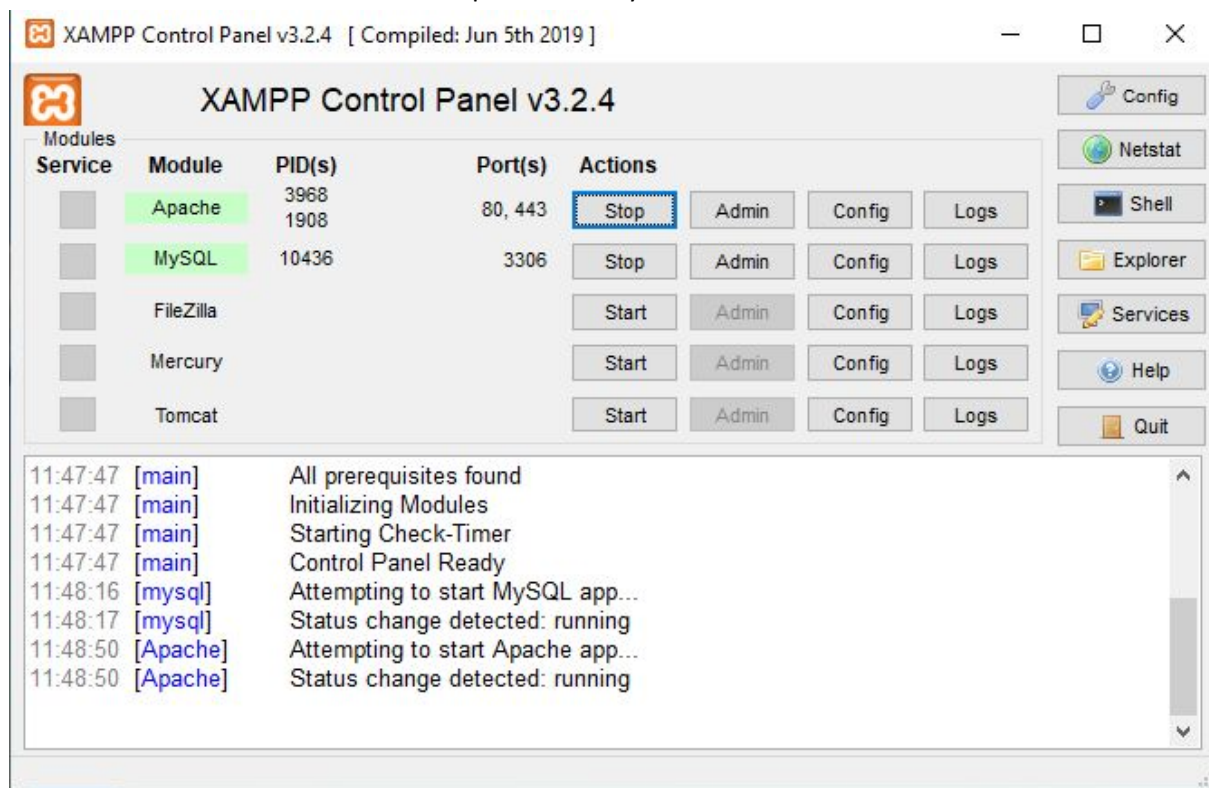
To implement the database and server we used XAMPP, which is a software stack that includes Apache Server and MySQL.

The app has limited functionality but allows a user to create an account by providing a username, password and email. The user can also sign in and sign out. The app also checks the database for previously registered users when creating an account.

The database and server for the project were implemented locally so there are some instructions to run it on a host machine.

Instructions:

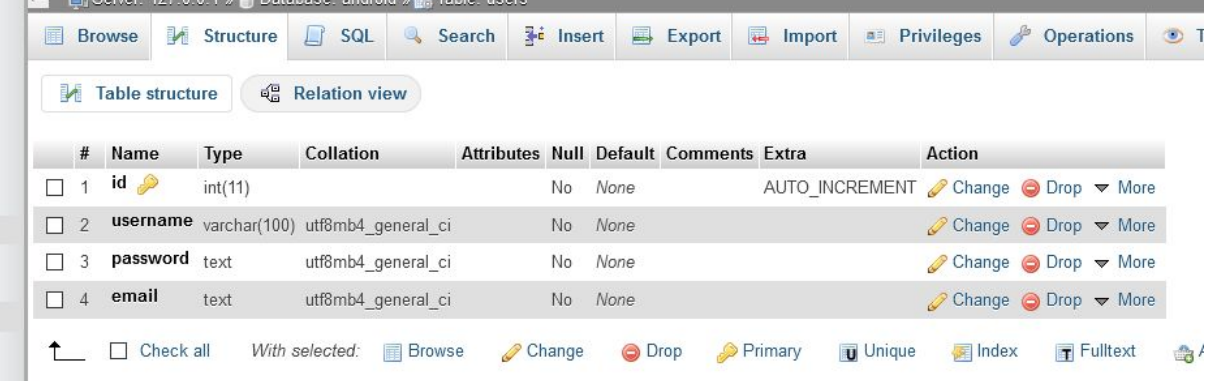
1. Clone the repository in Android Studios.
2. Download and XAMPP for your operating system from this location:
<https://www.apachefriends.org/index.html>
3. Install XAMPP directly onto your main drive (not in Program Files on Windows) so the server isn't blocked by Windows security features.
4. From the cloned repository, there will be a folder called 'Android'. Once XAMPP is installed copy this folder to C:/XAMPP/htdocs
This folder contains the PHP files for communication between the app, server and database.
5. Start XAMPP. From the menu Start Apache and MySQL.
















6. Open a new internet browser window.
Enter this address: localhost/phpMyAdmin

7. From the phpMyAdmin menu you can now create the required database. Call the database 'android'

8. Create a table in the database called 'users'. The table should have the following file structure:



The screenshot shows the phpMyAdmin interface with the 'Table structure' tab selected. The table 'users' has the following structure:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/> 1	id 	int(11)			No	None		AUTO_INCREMENT	 Change  Drop  More
<input type="checkbox"/> 2	username	varchar(100)	utf8mb4_general_ci		No	None			 Change  Drop  More
<input type="checkbox"/> 3	password	text	utf8mb4_general_ci		No	None			 Change  Drop  More
<input type="checkbox"/> 4	email	text	utf8mb4_general_ci		No	None			 Change  Drop  More

At the bottom, there are checkboxes for 'Check all' and 'With selected:', and buttons for 'Browse', 'Change', 'Drop', 'Primary', 'Unique', 'Index', and 'Fulltext'.

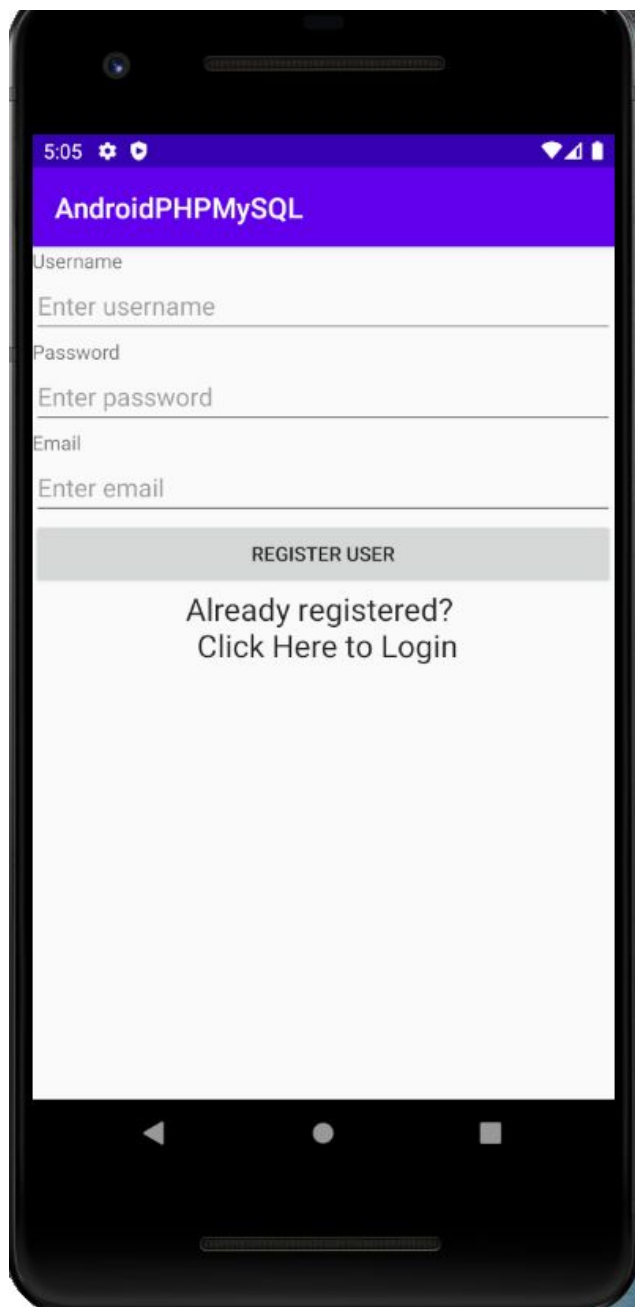
9. Open the app in Android Studio. Open the java class called 'Constants.java'
Inside the file replace the IP address in the ROOT_URL constant to the IP Address of your machine that is acting as host. To find your IP address type 'ipconfig' into Command Prompt.

Functionality:

The application allows a user to create an account with username, password and email. If a field is missing, then it will display an error message. If a username or email is already registered, then an error message will also be displayed.

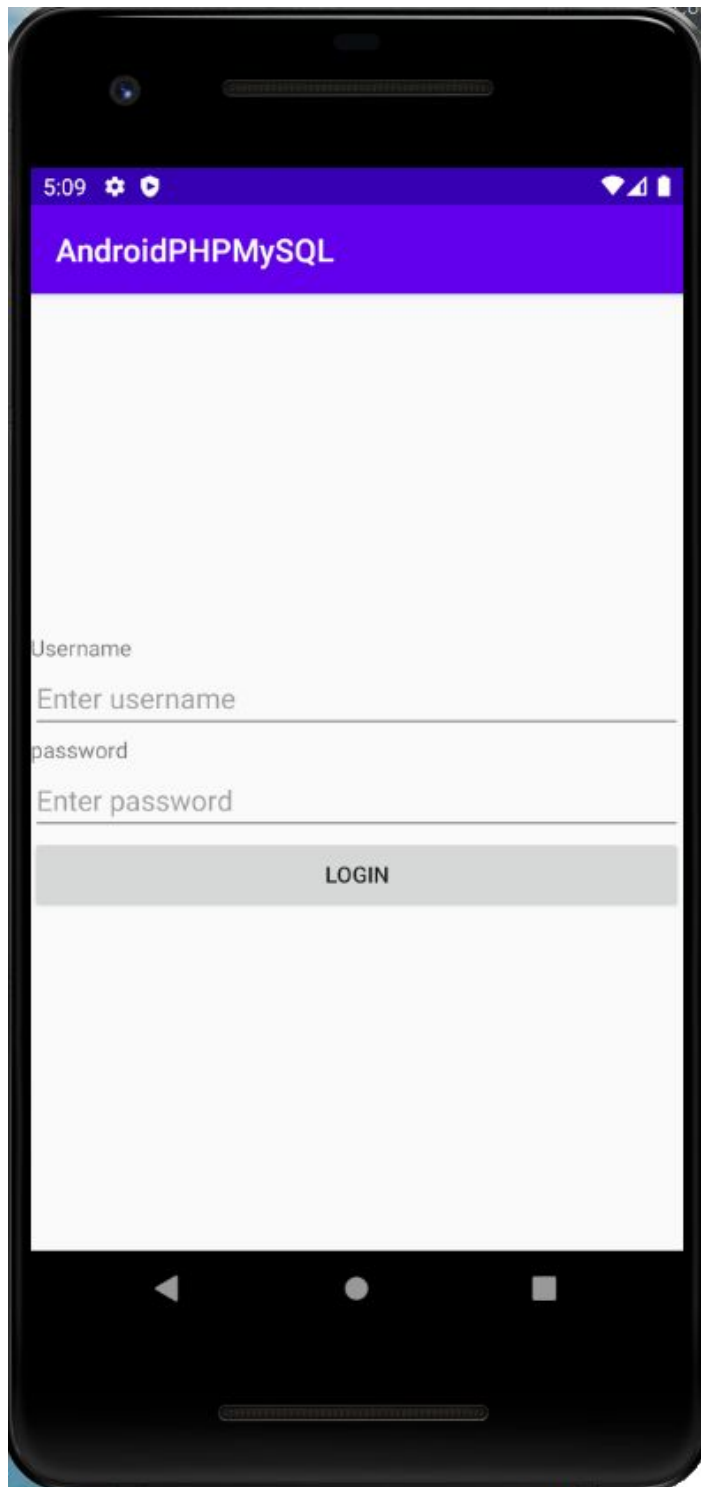
The user can click on the text below the Register User button if they already have an account and wish to log in.

Create Account Screen.

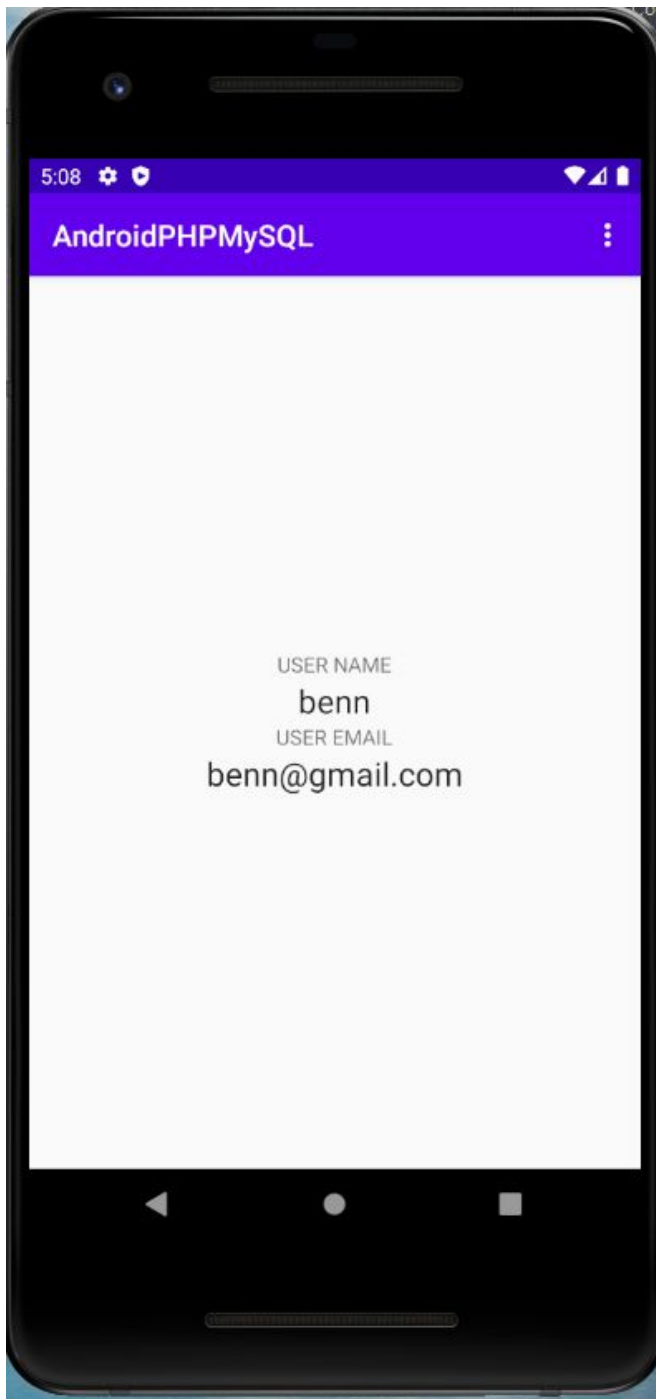


The screenshot shows a mobile application interface for creating an account. At the top, there is a status bar with the time 5:05, signal strength, and battery level. Below the status bar is a purple header with the text "AndroidPHPMySQL". The main form consists of three input fields: "Username" with the placeholder "Enter username", "Password" with the placeholder "Enter password", and "Email" with the placeholder "Enter email". Below these fields is a grey button labeled "REGISTER USER". Underneath the button, there is a text prompt: "Already registered? Click Here to Login". The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps buttons.

The Log in screen.



Once logged in the app lands on the logged in screen.



To logout the user presses the three menu buttons in the top-right of screen and the logout button will pop-out.

