Landing, Login, and Enrollment Pages Development

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CST 499: Capstone for Computer Software Technology

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June 30, 2022

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The first steps in developing this student information and course registration system are to develop the landing pages, the login page, and the enrollment or registration page, as well as to develop the database in MySQL, as well as the XAMPP remote server to host all these different elements. This document will examine the steps taken to first run a PHP file in XAMPP, create the above listed pages, create the MYSQL database and associated tables, and how to save the information from registration to the database.

The first step in this process is the downloading and installing of XAMPP and a PHP integrated development environment, or IDE. The next step would be to ensure that User Access Controls and Firewalls are turned off surrounding XAMPP. Not disabling the UAC or Firewalls can and most likely will cause issues, per Mikoluk (2013) “Disable User Account Control (UAC). UAC limits write permissions to XAMPP’s default installation directory (c:/Program Files/xampp), forcing you to install in a separate directory.” After the successful installation, open the XAMPP control panel and run the Apache server by clicking “start,” and connect to your local host either through http://localhost or 127.0.0.1. To run your own code on the local host, create code in an IDE or plain text editor such as notepad++, and save the file as a .php file extension within the XAMPP file directory, such as c:user/programs/xampp/htmldocs/cst499/home.php. Now, with the code saved and XAMPP running, navigate to your code with the above extension, or whatever extension you may have saved your PHP files under. If everything was installed correctly and the code is running properly, it will redirect a user to their specified page. To connect this part of the application with a MySQL database, in this case, PHPMyAdmin is the database of choice, and requires configuration or connection file in the PHP project folder with a .php file extension. The configuration class in the case of this application is referenced as the following:

```
<?php
try{
$connString = "mysql:host=localhost;dbname=cst499";
$user = "admin";
$pass = "12345";

$pdo = new PDO($connString,$user,$pass);
$pdo->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);
}
catch (PDOException $e){
die( $e->getMessage() );
}
?>
```

The above code block is the config.php file that contains the configuration class to be reused when connecting to the database and performing any operations on the database, such as those performed when registering or when the program is checking if a user is logged in or not.

Continuing on the topic of the database, the structure of the database and it's two respective tables is based off of the attributes that I have defined for a "course" and "student" and the data types, all of which are VARCHAR with varying lengths depending on the attribute, excluding the two primary keys that belong to each table, respectively. These primary keys are set to auto increment based on entries of users and manual entry in the database, in PHPMyAdmin, this is accomplished with the A_I checkbox, "A_I – Short for Auto Increment. If this option is enabled, then the values in the fields of the column will be auto incremented." (phpMyAdmin Create And Populate Tables Tutorial - SiteGround Tutorials, 2019) The data is submitted for the "studentinfo" table through the registration page, and the data that is submitted in the fields is saved to the database through a $POST method and is verified with a "var dump" function in the registration to ensure that variables were submitted and received correctly by the database. The "course" table is meant to be filled out manually, with the exception of the remaining seats left in the class which will be deducted as students are registered and the database verifies this calculation through the primary keys associated with each other.

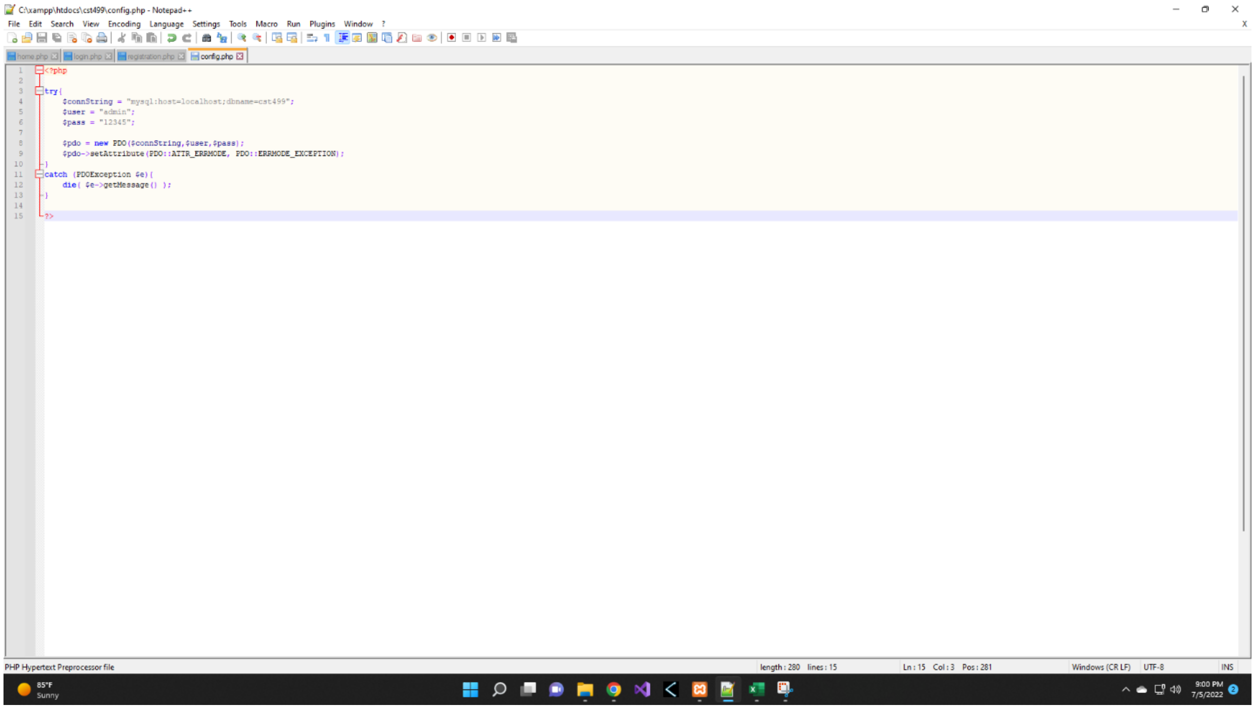
For the entry of information on the “registration page,” users are prompted to fill out some standard personal information fields such as first and last name, phone number, email address, and home address. After filling out the fields, the users select the submit button for the form, the form posts the information through a $POST method to “thank_you” page that also handles the posting of the data while simultaneously redirecting the user to the home page so that they may login. As stated above, to verify that the information was successfully collected and posted, a var_dump function is performed as well in the header of the page before the navigation bar as a means of testing for success in the flow of the information and to ensure that the SQL statement operates as it should.

This document has explored the few steps associated with setting up some of the foundational aspects of a web application as it relates to a student information system and a course registration system. These steps have been examined through tutorial examples, and following the reference page in this document, screenshots of the associated product. These foundational steps have explored the download and installation of XAMPP for a remote web server, PHPMyAdmin as a MySQL database and associated tables, and the development of a landing page, login page, and registration page.

References

Mikoluk, K. (2013, September 18). XAMPP Tutorial: How to Use XAMPP to Run Your Own Web Server. Udemy Blog. https://blog.udemy.com/xampp-tutorial/

phpMyAdmin Create And Populate Tables Tutorial - SiteGround Tutorials. (2019). SiteGround Knowledge Resources. https://www.siteground.com/tutorials/phpmyadmin/create-populate-tables/

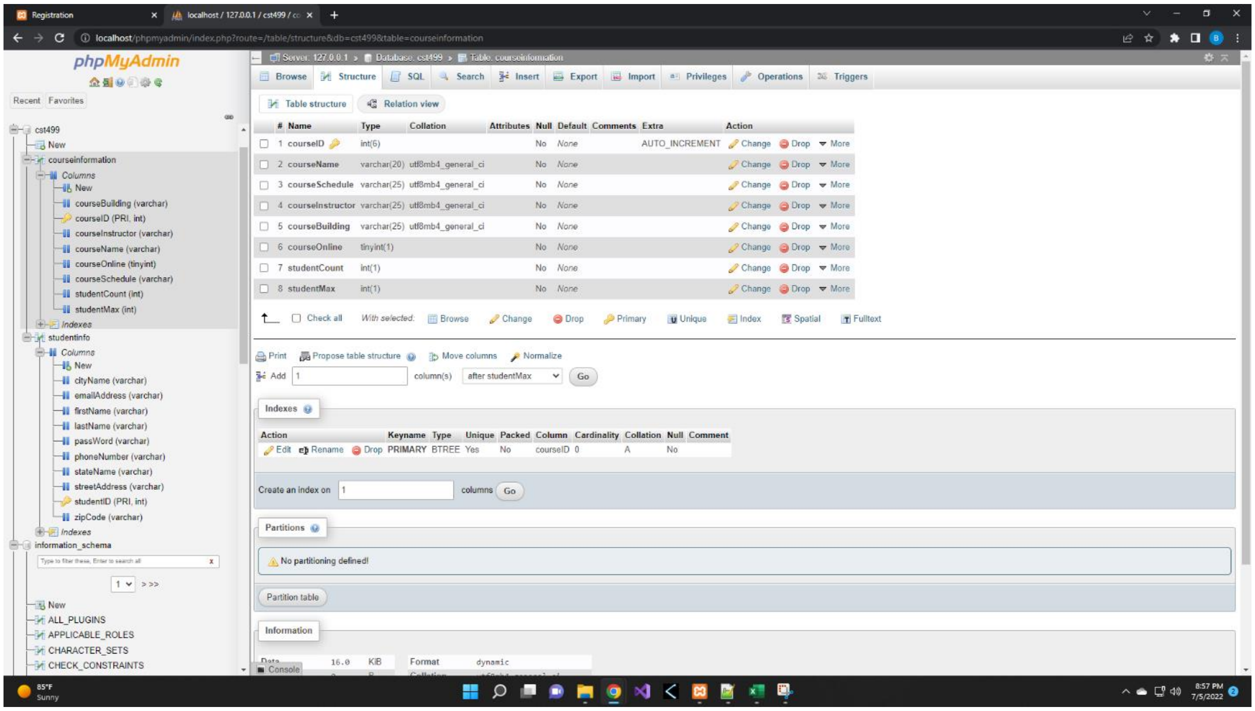

C:\xampp\htdocs\cst499\config.php - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
home.php
login.php
registration.php
config.php
PHP Hypertext Preprocessor file
length : 280 lines : 15
Ln : 15 Col : 3 Pos : 281
Windows (CR LF)
UTF-8
INS
85°F
Sunny
9:00 PM
7/5/2022

```php
<?php

try{
    $connString = "mysql:host=localhost;dbname=cst499";
    $user = "admin";
    $pass = "12345";

    $pdo = new PDO($connString,$user,$pass);
    $pdo->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);
}
catch (PDOException $e){
    die( $e->getMessage() );
}

?>
```



#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	courseID	int(6)			No	*None*		AUTO_INCREMENT	Change Drop More
2	courseName	varchar(20)	utf8mb4_general_ci		No	*None*			Change Drop More
3	courseSchedule	varchar(25)	utf8mb4_general_ci		No	*None*			Change Drop More
4	courseInstructor	varchar(25)	utf8mb4_general_ci		No	*None*			Change Drop More
5	courseBuilding	varchar(25)	utf8mb4_general_ci		No	*None*			Change Drop More
6	courseOnline	tinyint(1)			No	*None*			Change Drop More
7	studentCount	int(1)			No	*None*			Change Drop More
8	studentMax	int(1)			No	*None*			Change Drop More

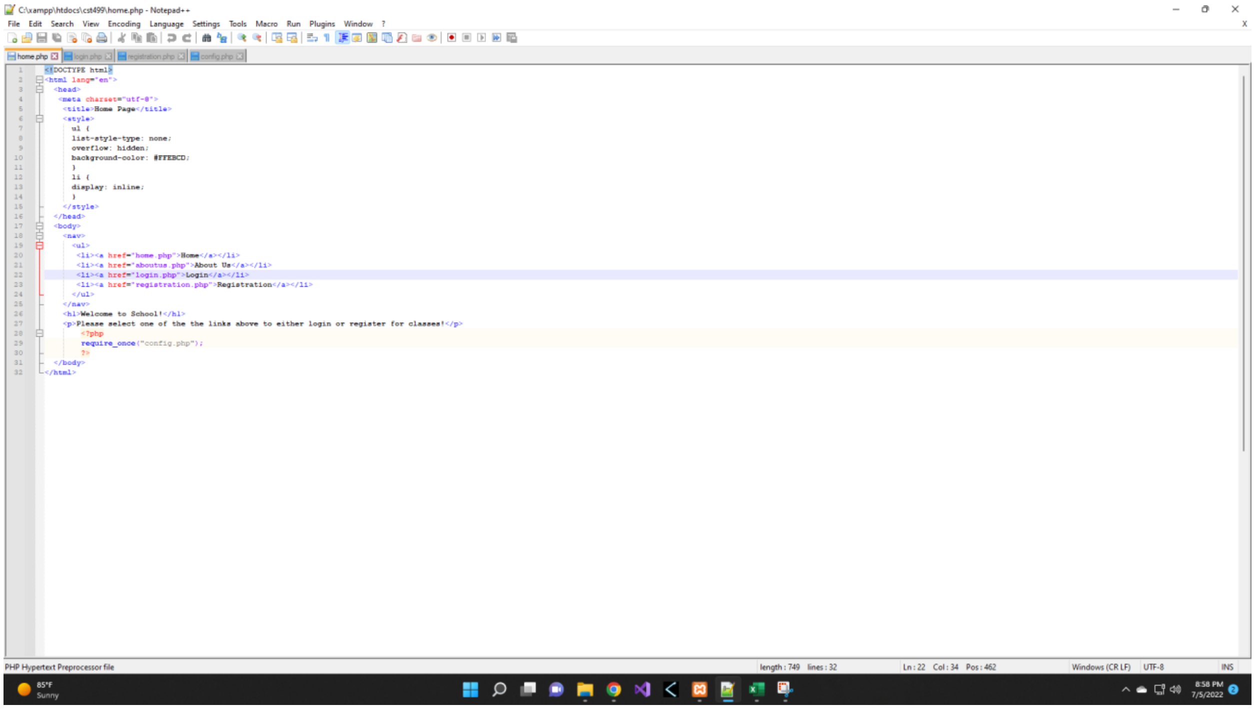
Add 1 column(s) after studentMax

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Rename Drop	PRIMARY	BTREE	Yes	No	courseID	0	A	No	

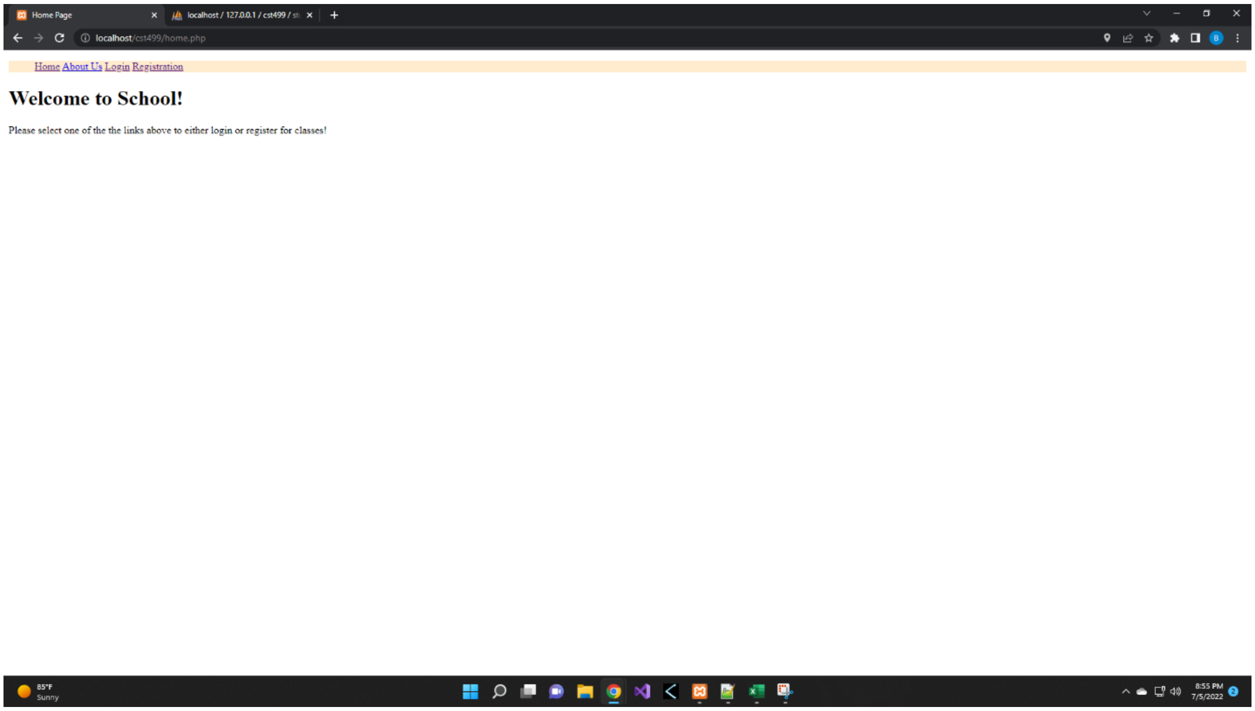
Create an index on 1 columns

No partitioning defined!

Data	16.0	KiB	Format	dynamic


C:\xampp\htdocs\cst499\home.php - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
home.php
login.php
registration.php
config.php
PHP Hypertext Preprocessor file
length : 749 lines : 32
Ln : 22 Col : 34 Pos : 462
Windows (CR LF)
UTF-8
INS
85°F
Sunny
8:58 PM
7/5/2022

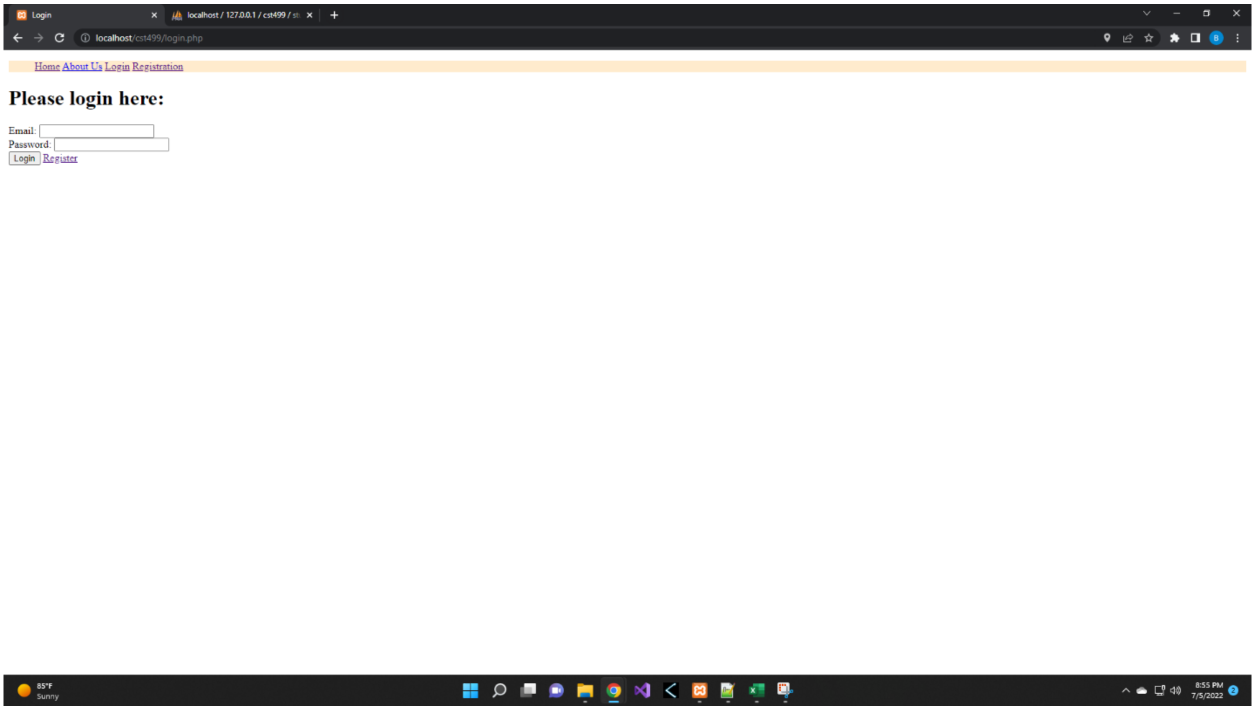
```
<!DOCTYPE html>
<html lang="en">
  <head>
   <meta charset="utf-8">
    <title>Home Page</title>
    <style>
      ul {
      list-style-type: none;
      overflow: hidden;
      background-color: #FFEBCD;
      }
      li {
      display: inline;
      }
    </style>
  </head>
  <body>
    <nav>
      <ul>
       <li><a href="home.php">Home</a></li>
       <li><a href="aboutus.php">About Us</a></li>
       <li><a href="login.php">Login</a></li>
       <li><a href="registration.php">Registration</a></li>
      </ul>
    </nav>
    <h1>Welcome to School!</h1>
    <p>Please select one of the the links above to either login or register for classes!</p>
        <?php
        require_once("config.php");
        ?>
  </body>
</html>
```


Home Page
localhost / 127.0.0.1 / cst499 / st
localhost/cst499/home.php
85°F
Sunny
8:55 PM
7/5/2022

Home About Us Login Registration

Welcome to School!

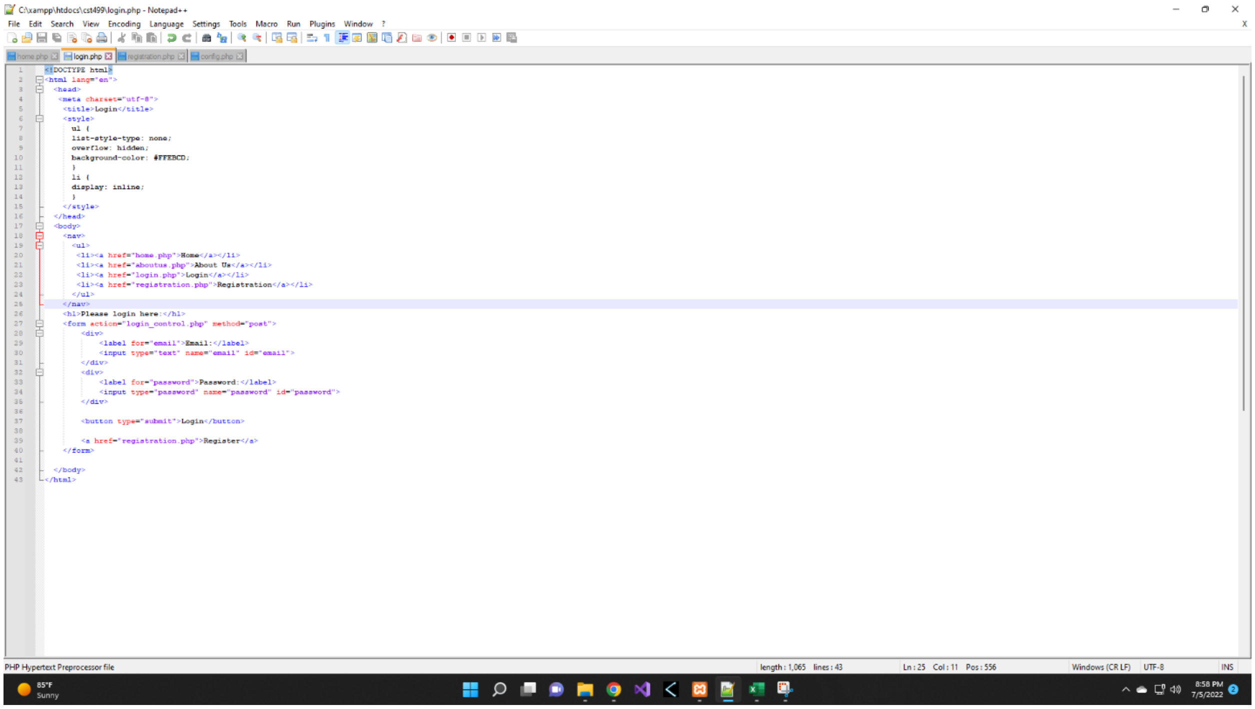
Please select one of the the links above to either login or register for classes!


Login
localhost / 127.0.0.1 / cst499 / st
localhost/cst499/login.php
85°F
Sunny
8:55 PM
7/5/2022

Home About Us Login Registration

Please login here:

Email:
Password:
Login Register

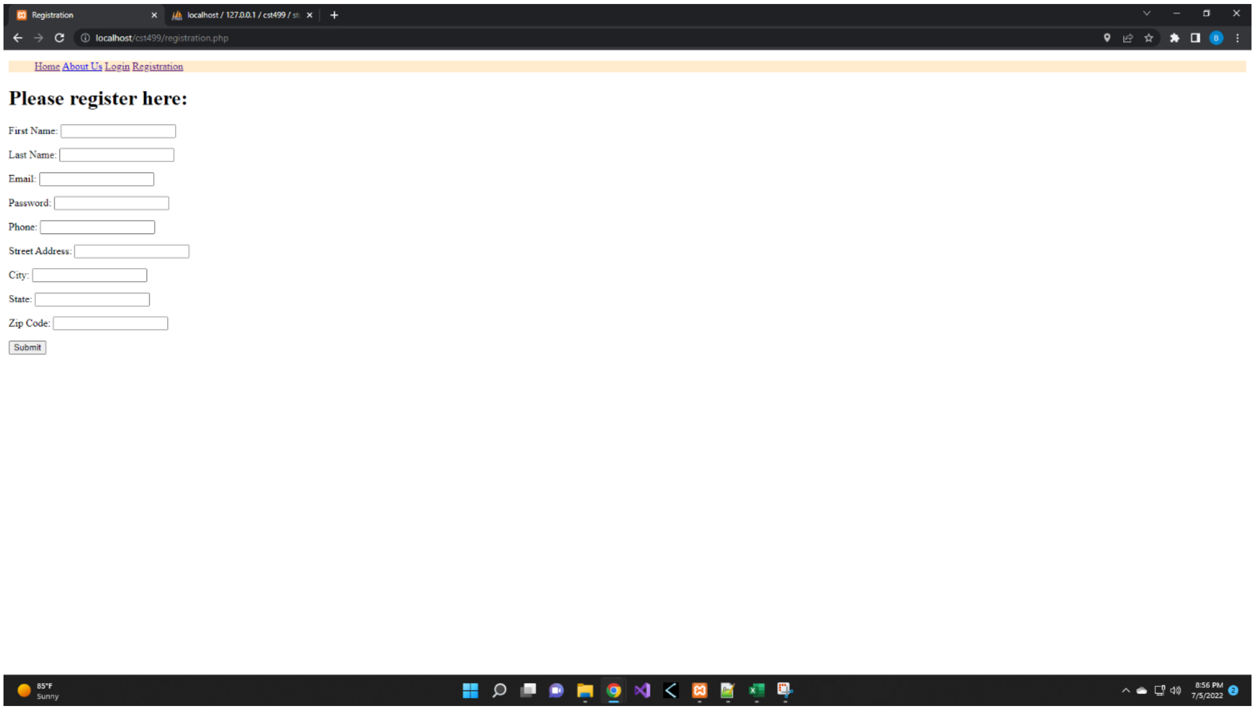

C:\xampp\htdocs\cst499\login.php - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
home.php
login.php
registration.php
config.php
PHP Hypertext Preprocessor file
length : 1,065 lines : 43
Ln : 25 Col : 11 Pos : 556
Windows (CR LF)
UTF-8
INS
85°F
Sunny
8:58 PM
7/5/2022

```
<!DOCTYPE html>
<html lang="en">
  <head>
   <meta charset="utf-8">
    <title>Login</title>
    <style>
      ul {
      list-style-type: none;
      overflow: hidden;
      background-color: #FFEBCD;
      }
      li {
      display: inline;
      }
    </style>
  </head>
  <body>
    <nav>
      <ul>
       <li><a href="home.php">Home</a></li>
       <li><a href="aboutus.php">About Us</a></li>
       <li><a href="login.php">Login</a></li>
       <li><a href="registration.php">Registration</a></li>
      </ul>
    </nav>
    <h1>Please login here:</h1>
    <form action="login_control.php" method="post">
        <div>
            <label for="email">Email:</label>
            <input type="text" name="email" id="email">
        </div>
        <div>
            <label for="password">Password:</label>
            <input type="password" name="password" id="password">
        </div>

        <button type="submit">Login</button>

        <a href="registration.php">Register</a>
    </form>

  </body>
</html>
```


Registration
localhost / 127.0.0.1 / cst499 / s
localhost/cst499/registration.php
85°F
Sunny
8:56 PM
7/5/2022

Home About Us Login Registration

Please register here:

First Name:

Last Name:

Email:

Password:

Phone:

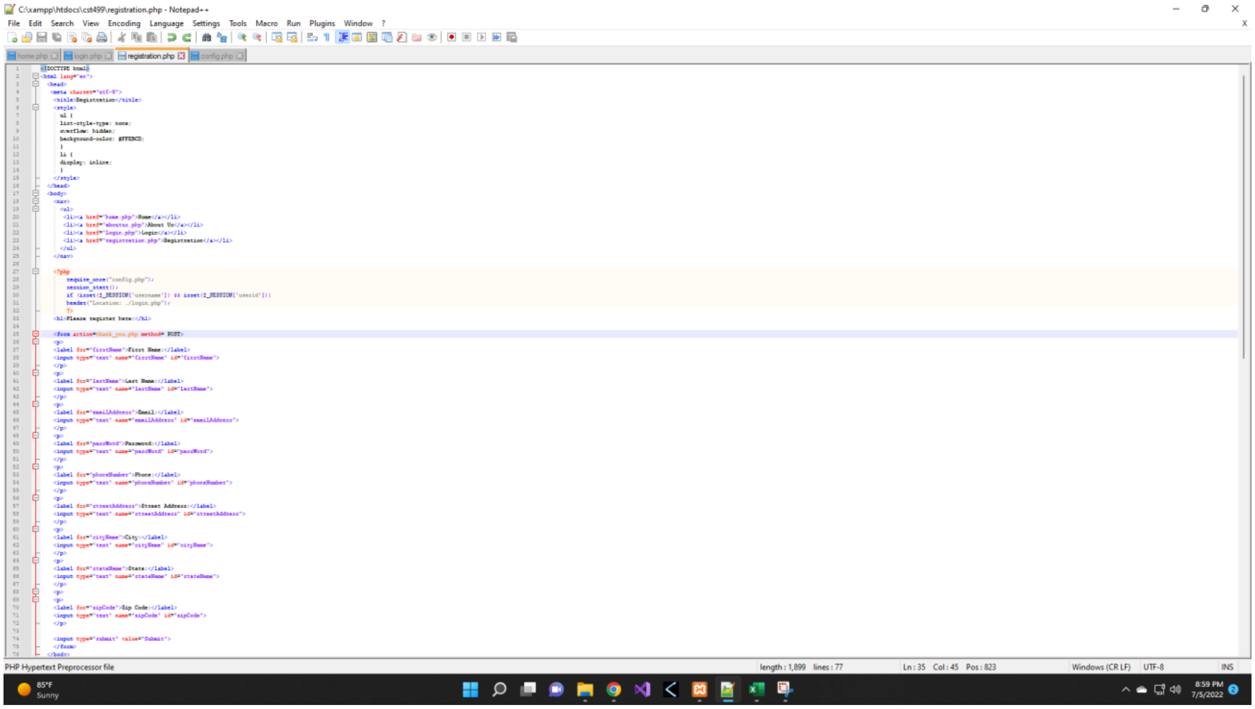
Street Address:

City:

State:

Zip Code:

Submit


C:\xampp\htdocs\cst499\registration.php - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
home.php
login.php
registration.php
config.php
PHP Hypertext Preprocessor file
length : 1,899 lines : 77
Ln : 35 Col : 45 Pos : 823
Windows (CR LF)
UTF-8
INS
85°F
Sunny
8:59 PM
7/5/2022

```
<!DOCTYPE html>
<html lang="en">
  <head>
   <meta charset="utf-8">
    <title>Registration</title>
    <style>
      ul {
      list-style-type: none;
      overflow: hidden;
      background-color: #FFEBCD;
      }
      li {
      display: inline;
      }
    </style>
  </head>
  <body>
    <nav>
      <ul>
       <li><a href="home.php">Home</a></li>
       <li><a href="aboutus.php">About Us</a></li>
       <li><a href="login.php">Login</a></li>
       <li><a href="registration.php">Registration</a></li>
      </ul>
    </nav>

    <?php
        require_once("config.php");
        session_start();
        if (isset($_SESSION['username']) && isset($_SESSION['userid']))
        header("Location: ./login.php");
        ?>
    <h1>Please register here:</h1>

    <form action=thank_you.php method= POST>
    <p>
    <label for="firstName">First Name:</label>
    <input type="text" name="firstName" id="firstName">
    </p>
    <p>
    <label for="lastName">Last Name:</label>
    <input type="text" name="lastName" id="lastName">
    </p>
    <p>
    <label for="emailAddress">Email:</label>
    <input type="text" name="emailAddress" id="emailAddress">
    </p>
    <p>
    <label for="passWord">Password:</label>
    <input type="text" name="passWord" id="passWord">
    </p>
    <p>
    <label for="phoneNumber">Phone:</label>
    <input type="text" name="phoneNumber" id="phoneNumber">
    </p>
    <p>
    <label for="streetAddress">Street Address:</label>
    <input type="text" name="streetAddress" id="streetAddress">
    </p>
    <p>
    <label for="cityName">City:</label>
    <input type="text" name="cityName" id="cityName">
    </p>
    <p>
    <label for="stateName">State:</label>
    <input type="text" name="stateName" id="stateName">
    </p>
    <p>
    <p>
    <label for="zipCode">Zip Code:</label>
    <input type="text" name="zipCode" id="zipCode">
    </p>

    <input type="submit" value="Submit">
    </form>
  </body>
```