**Landing, Login, and Enrollment Pages Development**

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CST 499 Capstone for Computer Software Technology

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October 23, 2023

**Figure 1**

**A screenshot of a computer

Description automatically generated***Landing Page*

**Figure 2**

*Registration Page*

*A screenshot of a computer

Description automatically generated*

**Figure 3**

*Registration Confirmation*

*A screenshot of a computer

Description automatically generated*

**Figure 4**

*Login Page* *A screenshot of a computer

Description automatically generated*

**Figure 5**

*Login Confirmation & Profile Page* *A screenshot of a computer

Description automatically generated*

**Figure 6**

*Authentication Failure* *A screenshot of a computer

Description automatically generated*

**Figure 7**

*phpMyAdmin dashboard showing cst310 schema and tbluser table* *A screenshot of a computer

Description automatically generated*

**Figure 8**

*phpMyAdmin dashboard showing tbluser structure A screenshot of a computer

Description automatically generated*

**Figure 9**

*auth\_session.php*

<?php

session\_start();

if(!isset($\_SESSION["username"])) {

header("Location: login.php");

exit();

}

?>

**Figure 10**

*db.php*

<?php

$con = mysqli\_connect("localhost","root","","cst310");

if (mysqli\_connect\_errno()){

echo "Failed to connect" . mysqli\_connect\_error();

}

?>

**Figure 11**

*Footer.php*

<?php

error\_reporting(E\_ALL ^ E\_NOTICE);

?>

<!DOCKTYPE html>

<html lang="en">

<head>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="http://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/1.12.0/jquery.min.js"></script>

<script src="http://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/js/bootstrap.min.js"></script>

</head>

<body>

<div class="navbar-fixed-bottom row-fluid">

<div class="navbar-inner">

<div class="container text-center">

Jonathan Schaub, CST 499. Updated: October 9, 2023

</div>

</div>

</div>

</body>

</html>

**Figure 12**

*index.php*

<?php

error\_reporting(E\_ALL ^ E\_NOTICE);

?>

<!DOCKTYPE html>

<html lang="en">

<head>

<title> Home Page </title>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="http://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/1.12.0/jquery.min.js"></script>

<script src="http://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/js/bootstrap.min.js"></script>

</head>

<body>

<?php require 'master.php';?>

<div class="container text-center">

<h3>You've reached the CST 499 Student Portal Project homepage.<br>

You can login or register in the upper-right corner.</h3>

</div>

<?php require\_once 'footer.php';?>

</body>

</html>

**Figure 13**

*login.php*

<?php

error\_reporting(E\_ALL ^ E\_NOTICE);

?>

<!DOCKTYPE html>

<html lang="en">

<head>

<title> Login Page </title>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="http://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/1.12.0/jquery.min.js"></script>

<script src="http://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/js/bootstrap.min.js"></script>

</head>

<body>

<?php require 'master.php';

?>

<?php

require('db.php');

session\_start();

if (isset($\_POST['email'])) {

$email = stripslashes($\_REQUEST['email']);

$email = mysqli\_real\_escape\_string($con, $email);

$password = stripslashes($\_REQUEST['password']);

$password = mysqli\_real\_escape\_string($con, $password);

$query = "SELECT \* FROM `tbluser` WHERE email='$email'

AND password='$password'";

$result = mysqli\_query($con, $query) or die(mysql\_error());

$rows = mysqli\_num\_rows($result);

if ($rows == 1) {

$\_SESSION['email'] = $email;

header("Location: profile.php");

} else {

echo "<center>

<h3>

<FONT COLOR=red>Invalid email/password, or user not found.

</font>

</h3><br/>

</center>";

}

} else {

}

?>

<div class="container text-center">

<h1>Welcome to the Login page</h1>

</div>

<div>

<center>

<form class="form" method="post" name="login">

<h1 class="login-title">Login</h1>

<input type="text" class="login-input" name="email" placeholder="Email Address" autofocus="true"/><br>

<input type="password" class="login-input" name="password" placeholder="Password"/><br>

<input type="submit" value="Login" name="submit" class="login-button"/><br><br>

<p class="link"><a href="registration.php">New User Registration</a></p>

</form>

</center>

</div>

<?php require\_once 'footer.php';?>

</body>

</html>

**Figure 14**

*master.php*

<?php

error\_reporting(E\_ALL ^ E\_NOTICE);

ini\_set('session.use\_only\_cookies','1');

session\_start();

if( isset($SESSION['username']))

echo "Welcome: " . $SESSION['username'];

?>

<!DOCKTYPE html>

<html lang="en">

<head>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="http://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/1.12.0/jquery.min.js"></script>

<script src="http://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/js/bootstrap.min.js"></script>

</head>

<body>

<div class="jumbotron">

<div class="container text-center">

<h1>UAGC Sample Student Portal</h1>

</div>

</div>

<nav class="navbar navbar-inverse">

<div class="container=fluid">

<div class="navbar-header">

<button type="button" class="navbar-toggle" data-toggle="collapse" data-target="#myNavbar">

<span class="icon-bar"></span>

<span class="icon-bar"></span>

<span class="icon-bar"></span>

</button>

</div>

<div class="collapse navbar-collapse" id="myNavbar">

<ul class="nav navbar-nav">

</ul>

<ul class="nav navbar-nav navbar-right">

<?php

session\_start();

if( isset($\_SESSION['username']))

{

echo '<li><a href="profile.php"><span class="glyphicon glyphicon-briefcase"></span> Profile</a></li>';

echo '<li><a href="index.php?Logout=1"><span class="glyphicon glyphicon-off"></span> Logout</a></li>';

}

else

{

echo '<li><a href="login.php"><span class="glyphicon glyphicon-user"></span> Login</a></li>';

echo '<li><a href="registration.php"><span class="glyphicon glyphicon-pencil"></span> Registration</a></li>';

}

?>

</ul>

</div>

</div>

</nav>

</body>

</html>

**Figure 15**

*profile.php*

<?php

error\_reporting(E\_ALL ^ E\_NOTICE);

?>

<!DOCKTYPE html>

<html lang="en">

<head>

<title> Profile Page </title>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="http://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/1.12.0/jquery.min.js"></script>

<script src="http://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/js/bootstrap.min.js"></script>

</head>

<body>

<?php include 'master.php';?>

<div class="container text-center">

<h1>Welcome to the Profile page</h1>

</div>

<br><br>

<div>

<center>

<b>LOGIN SUCCESSFUL!</b>

</center>

</div>

<?php

session\_start();

require('db.php');

$strSQL = "SELECT email, firstname, lastname, address, phone, salary, ssn FROM tbluser WHERE email = '".$\_SESSION['email']."'";

$rs = mysqli\_query($con, $strSQL);

while($row = mysqli\_fetch\_array($rs)) {

echo "Email Address : " . $row['email'] . "<br />";

echo "First Name : " . $row['firstname'] . "<br />";

echo "Last Name : " . $row['lastname'] . "<br />";

echo "Address : " . $row['address'] . "<br />";

echo "Phone Number : " . $row['phone'] . "<br />";

echo "Employee Salary : " . $row['salary'] . "<br />";

echo "Social Security No. : " . $row['ssn'] . "<br />";

}

?>

<?php include 'footer.php';?>

</body>

</html>

**Figure 16**

*registration.php*

<?php

error\_reporting(E\_ALL ^ E\_NOTICE);

?>

<!DOCKTYPE html>

<html lang="en">

<head>

<title> Registration Page </title>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="http://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/1.12.0/jquery.min.js"></script>

<script src="http://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/js/bootstrap.min.js"></script>

</head>

<body>

<?php include 'master.php'; ?>

<div class="container text-center">

<h1>Welcome to the Registration page</h1>

</div>

<?php

require('db.php');

if (isset($\_REQUEST['email'])) {

$email = ($\_REQUEST['email']);

$email = mysqli\_real\_escape\_string($con, $email);

$password = ($\_REQUEST['password']);

$password = mysqli\_real\_escape\_string($con, $password);

$firstname = ($\_REQUEST['firstname']);

$firstname = mysqli\_real\_escape\_string($con, $firstname);

$lastname = ($\_REQUEST['lastname']);

$lastname = mysqli\_real\_escape\_string($con, $lastname);

$address = ($\_REQUEST['address']);

$address = mysqli\_real\_escape\_string($con, $address);

$phone = ($\_REQUEST['phone']);

$phone = mysqli\_real\_escape\_string($con, $phone);

$studentnbr = ($\_REQUEST['studentnbr']);

$studentnbr = mysqli\_real\_escape\_string($con, $studentnbr);

$query = "INSERT into `tblUser` (email, password, firstname, lastname, address, phone, studentnbr)

VALUES ('$email', '$password', '$firstname', '$lastname', '$address', '$phone', '$studentnbr')";

$result = mysqli\_query($con, $query);

if ($result) {

echo "<div class='form'>

<center><h3>Registration Successful!</h3><br/>

<p class='link'>Click here to <a href='login.php'>Login</a></p>

</div>";

} else {

echo "<div class='form'>

<h3>Registration Failed</h3><br/>

<p class='link'>Click here to <a href='registration.php'>registration</a> again.</p>

</div>";

}

} else {

?>

<center>

<form class="form" action="" method="post">

<h1 class="login-title">Registration</h1>

<input type="text" class="login-input" name="email" placeholder="Email Address" required />

<input type="password" class="login-input" name="password" placeholder="Password" required />

<input type="text" class="login-input" name="firstname" placeholder="First Name" required />

<input type="text" class="login-input" name="lastname" placeholder="Last Name" required /><br>

<input type="text" class="login-input" name="address" placeholder="Address" required />

<input type="text" class="login-input" name="phone" placeholder="Phone" required />

<input type="text" class="login-input" name="studentnbr" placeholder="Student Number" required />

<input type="submit" name="submit" value="Register" class="login-button"><br><br>

<p class="link"><a href="login.php">Existing User Login</a></p>

</form>

</center>

<?php

}

?>

<?php include 'footer.php';?>

</body>

</html>

**Introduction**

Most modern websites spanning from business to education, professions, entertainment, and more have multiple working parts beyond simple HTML blogs of the 90s. From software like XAMPP that runs the apache server to scripting languages like HTML, and programming languages like PHP and MySQL, there are several systems that need to interact with one another in order to have a working website. A central part of many websites is users having the ability to create an account with a username and password to save preferences, access services, or many other purposes. This paper will explore the creation and inner workings of a student portal website.

**Running a PHP file in XAMPP**

The first step in running a PHP file in XAMPP is to download the XAMPP software from <https://www.apachefriends.org>. Once the software is downloaded and installed, a PHP file needs to be created in or moved to the htdocs folder within the XAMPP software folder (Johari, 2022). After launching the XAMPP software, the Apache Web Server needs to be started. With the Apache Web Server running, the user can now use a web browser to navigate to localhost/[filename].php (Johari, 2022). Since this paper will discuss running the registration and login pages for a student portal, the MySQL Database service in order for the website to query the server database.

**MySQL Database Functions and Connection Custom Class**

I wrote the following SQL code to create the table and attributes:

CREATE TABLE cst310.tblUser (

userID INT PRIMARY KEY AUTO\_INCREMENT,

email VARCHAR(255) UNIQUE NOT NULL,

password VARCHAR(255) NOT NULL,

firstname VARCHAR(100) NOT NULL,

lastname VARCHAR(100) NOT NULL,

address TEXT NOT NULL,

phone VARCHAR(20) NOT NULL,

studentnbr VARCHAR(50) UNIQUE NOT NULL

);

This SQL code creates a table “cst310” in the schema “tblUser” with the following attributes: userID, email, password, firstname, lastname, address, phone, studentnbr. The userID attribute is designated as the primary key and a type of integer that auto-increments in order to preserve the integrity of the data by having a primary key that is an attribute that is managed by the database to avoid the risk of duplicates or values which may cause errors. The connection to the MySQL database is established using a customer class located in the “db.php” file. The “require()” function is used to call the connection file whenever it is needed on the various webpages.

**Examining the Registration page**

When creating a registration page, recall the attributes created in the SQL query: userID, email, password, firstname, lastname, address, phone, studentnbr. When the user navigates to the registration page, they are presented with a form:

<form class="form" action="" method="post">

<h1 class="login-title">Registration</h1>

<input type="text" class="login-input" name="email" placeholder="Email Address" required />

<input type="password" class="login-input" name="password" placeholder="Password" required />

<input type="text" class="login-input" name="firstname" placeholder="First Name" required />

<input type="text" class="login-input" name="lastname" placeholder="Last Name" required /><br>

<input type="text" class="login-input" name="address" placeholder="Address" required />

<input type="text" class="login-input" name="phone" placeholder="Phone" required />

<input type="text" class="login-input" name="studentnbr" placeholder="Student Number" required />

<input type="submit" name="submit" value="Register" class="login-button"><br><br>

<p class="link"><a href="login.php">Existing User Login</a></p>

</form>

This form provides separate fields for the user to enter an e-mail address, password, first and last name, address, phone number, and student number, followed by a “Submit” button (Zafar, 2019). In the first line of code, we can see the purpose of this form is method=”post”, where to post is to query the database and submit. The database is queried in the section below where an “INSERT into” query is performed using the information captured in the post method in order to assign the strings and user-input information into the attributes as a new row in the database (Zafar, 2019):

$query = "INSERT into `tblUser` (email, password, firstname, lastname, address, phone, studentnbr)

VALUES ('$email', '$password', '$firstname', '$lastname', '$address', '$phone', '$studentnbr')";

Once the “INSERT into” query completes, the new user’s registration information is added to the database in the next sequential increment for the userID primary key. In order to create the login page, we need to access the database but rather than using post and INSERT into to submit data to the database, the below section of code uses post and a SELECT query to authenticate the user’s e-mail address and password in the database. If the user does not exist in the database or the user provides invalid credentials, the else command escapes to display the message “Invalid email/password, or user not found.” When the credentials authenticate successfully, a session is created using the value for that user’s $email attribute:

<?php

require('db.php');

session\_start();

if (isset($\_POST['email'])) {

$email = stripslashes($\_REQUEST['email']);

$email = mysqli\_real\_escape\_string($con, $email);

$password = stripslashes($\_REQUEST['password']);

$password = mysqli\_real\_escape\_string($con, $password);

$query = "SELECT \* FROM `tbluser` WHERE email='$email'

AND password='$password'";

$result = mysqli\_query($con, $query) or die(mysql\_error());

$rows = mysqli\_num\_rows($result);

if ($rows == 1) {

$\_SESSION['email'] = $email;

header("Location: profile.php");

} else {

echo "<center>

<h3>

<FONT COLOR=red>Invalid email/password, or user not found.

</font>

</h3><br/>

</center>";

}

Not displayed is a similar form to that of the registration page, however on the login page the only two form fields are for the user to enter their e-mail address and password. Using the above text we can see, from top to bottom, the “require(‘db.php’)” function establishes the connection with the database in preparation for the form to “post,” or submit, the information to “SELECT” any applicable row that has both a matching e-mail address and password. Then, “if” the SELECT returns one (1) row, the user is directed to profile.php.

**References**

Johari, A. (2022). *How to run a PHP program in Xampp?* Edureka. <https://www.edureka.co/blog/how-to-run-a-php-program-in-xampp/>

Zafar, N. (2019). *Create a Registration and Login System with PHP and MySQL*. SpeedySense. <https://speedysense.com/create-registration-login-system-php-mysql/>