Week 2 - Assignment

Jose Herrera Medina

CST 499: Capstone for Computer Software Technology

Professor Joseph Rangitsch

September 25, 2024

# Running a PHP File in XAMPP

XAMPP provides a convenient environment for testing PHP files locally. To run a PHP file:

1. Ensure the Apache and MySQL services are started in the XAMPP Control Panel.
2. Place your PHP file (e.g., index.php) in the htdocs folder within your XAMPP installation directory.
3. Open a web browser and access the file using the URL http://localhost/index.php.

# Creating the Landing, Login, and Registration Pages

The landing page (index.php) serves as the users' initial point of contact. It welcomes them and provides links to log in or register. The login page (login.php) allows existing users to authenticate themselves, while the registration page (register.php) enables new users to create accounts.

These pages are built using HTML for structure, CSS for styling, and PHP for dynamic content and database interaction. The HTML forms capture user input, and the PHP code processes this input connect to the database and performs necessary actions like user authentication and data insertion.

# Creating the MySQL Database and Tables

MySQL is used to store user and course data. Using a MySQL client or a tool like phpMyAdmin, we create a database named course\_registration. Within this database, we create tables such as users, courses, and enrollments to store user information, course details, and enrollment records.

# MySQL Database Functions and Database Connection Class

MySQL functions like mysqli\_connect(), mysqli\_query(), mysqli\_prepare(), and mysqli\_stmt\_execute() are essential for interacting with the database. A custom database connection class can be created to improve code organization and reusability. This class encapsulates database connection logic, query execution, and result handling, making managing database interactions throughout the application easier.

# Registration Page Layout and PHP Source Code

The registration page layout consists of an HTML form with input fields for collecting user details like user ID, password, name, phone, and email. The PHP code behind the registration page handles form submission establishes a database connection, securely hashes the password using password\_hash(), and inserts the new user's information into the users' table. It also includes error handling and validation to ensure data integrity and security.

# Table for User Information

The users' table in the MySQL database stores user data. It typically has columns for id (a unique identifier), user\_id (a unique username), password (the hashed password), name, phone, and email.

# Steps to Create the Registration Page and Save User Information

1. **Design the Form:** Create an HTML form with input fields for the required user information.
2. **Implement PHP Code:**
   * Retrieve form data using $\_POST.
   * Establish a database connection.
   * Hash the password using password\_hash().
   * Construct and execute an SQL INSERT query to add the user data to the users' table.
   * Handle potential errors and provide feedback to the user.
3. **Enhance User Experience:** Add client-side validation and clear instructions to improve usability.

# Conclusion

This assignment involved creating the foundational components of a user registration system using PHP and XAMPP. It covered running PHP files, designing web pages, interacting with a MySQL database, and implementing user registration functionality. A functional and secure registration system can be developed by combining these elements and adhering to best practices for security and user experience.

# Screenshots

Landing Page:

A screenshot of a computer screen

Description automatically generated

A screen shot of a computer screen

Description automatically generated

Login Page:  
A screen shot of a login screen

Description automatically generated

A screen shot of a computer

Description automatically generated

Registration Page:  
A screenshot of a login form

Description automatically generated

A screen shot of a computer screen

Description automatically generated

SQL Tables:  
A screenshot of a computer

Description automatically generated

References

Meloni, J. (2016). *Sams Teach Yourself PHP, MySQL, and Apache All in One*. Sams Publishing.

Welling, L., & Thomson, L. (2008). *PHP and MySQL Web Development*. Addison-Wesley Professional.