

Quiz2 Fall2025 ITWS2110: Web Systems

Individual Work

Due: 12/02/2025 by 11:59 pm ET on LMS

Total Points 150

Part 1 (50 points)

Please write a paragraph for each written part of the questions (1.1 and 1.2) given below. Please explain them using your own words. Include the part 1 written document (word/pdf) inside the zipped folder and submit on LMS.

1.1. Explain three possible features of a web application that require (or, at least, made easier by) a server-side component written in a language such as PHP.

Don't just mention the feature, explain in detail what it involves.

1.2. Explain two actions that can be taken to secure a web application. These may be related to user-authentication & authorization, server configuration, codebase, and/or network infrastructure. Don't just mention the feature, explain in detail what it involves.

Part 2 (100 points)

In this Quiz, you will create a project information website. The initial goal is to allow users to:

- Login, (or register)
- Enter the project information that they are a member of
- View the project information

1. Create a virtual host named websysquiz2 (10 points)

- 1.1. Make sure it is served on port 80 or localhost
- 1.2. Make sure it is serving files out of a folder named
ITWS2110-Fall2025-yourRCSID-Quiz2

1. Database setup (20 points)

- 1.1. Save the queries to create your database in setupDB.txt
- 1.2. Create a database in either MySQL, or PostgreSQL named
ITWS2110-Fall2025-yourRCSID-Quiz2
- 1.3. Create a table in the database named 'users' to hold (at least) the following;
 - 1.3.1. userId (primary key)

- 1.3.2. firstName
 - 1.3.3. lastName
 - 1.3.4. nickName
 - 1.3.5. fields necessary to store a secure, salted password
- 1.1. Create a table in the database named 'projects' containing (at least) the following;
- 1.1.1. projectId (primary key)
 - 1.1.2. name
 - 1.1.3. description
- 1.2. Create a table in the database named 'projectMembership' to hold (at least) the following;
- 1.2.1. projectId (foreign key to projects.projectId)
 - 1.2.2. memberId (foreign key to users.userId)
1. Login and Registration (30 points)
- 1.1. User should be presented with a login page (login.php)
 - 1.2. Allow the user to enter a user ID and Password
 - 1.3. If successful, show index.php, with the following options:
 - 1.3.1. Add a project
 - 1.3.2. View existing projects
 - 1.4. If the login attempt was unsuccessful, and the user does not exist in the database, bring them to a register.php page:
 - 1.4.1. Display a form with all the fields for the user table.
 - 1.4.2. Upon submission, add the user to the table.
 - 1.4.3. Passwords must be salted and hashed
 - 1.4.4. Upon successful registration, bring them to index.php
 - 1.5. If the login attempt was unsuccessful, the user exists, but the password is wrong or missing, give an error message and let them try again.
 - 1.6. Add at least 12 users to your 'users' table.
2. Add project information (30 points)
- 2.1. The project.php page that is linked from index.php, should show a form to add the project information, which includes the name of the project, the description, and the project members.
 - 2.2. Please note that each project should have at least 3 members.
 - 2.3. The project members should be selected from already existing users from the users table.
 - 2.4. If a project with the same name already exists in the database is entered, an error message should be displayed, and the record should not be inserted into the database.
 - 2.5. Once the project has been added, display the newly added project and the other pre-existing projects. You may use CSS to highlight the project that was just added.
 - 2.6. Add at least 4 projects using the page you created.

3. Describe in your README.md file (Do not code this) (10 points)
 - 3.1. Any design decisions that you took in completing this quiz.
 - 3.2. Describe how you would handle a situation where a user came to the site for the very first time and no database existed (Think install)
 - 3.3. How could you add functionality to prevent duplicate entries for the same project?
 - 3.4. Suppose you want to include functionality to let people vote on the final in-class project presentations.
 - 3.4.1. What additional table(s) will you include to support this?
 - 3.4.2. How will you structure the data in these table(s)?
 - 3.4.3. How could you add functionality to prevent users from submitting a vote to their own project?

Upon completion, zip up your **ITWS2110-Fall2025- yourRCDID-Quiz2** folder and submit it to LMS. Make sure it contains;

- setupDB.txt – a file which will contain the commands necessary to recreate your database (setupDB.txt is the name for the **export your database**)
- All of your pages and resources for the application
- Add screenshots of your webpage
- Add screenshots of the database (screenshots of phpMyAdmin or any GUI you used for PostgresSQL)
- README.md file

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Part 1: 50 points

Part 2: 100 points