

**Title:** Quizletics

**Who:**

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- Enrique Marroquin
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**Project Description:**

Quizletics is a user-friendly website that offers randomized quizzes based on 9 different categories and 3 different difficulties. With the ability to create a profile, users can keep track of their information, earn badges, and keep stats on the quizzes they have taken, all on their profile page. The quizzes themselves are timed and feature randomized questions based on the category and difficulty level selected by the user.

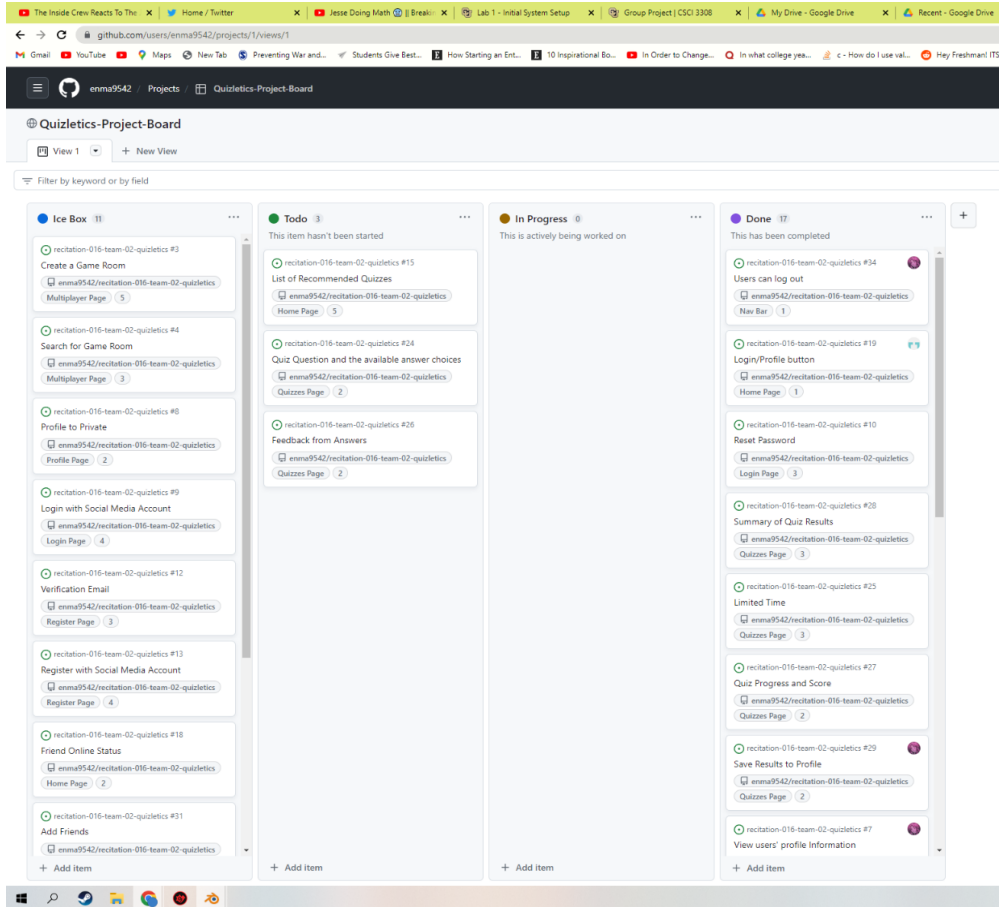
The website makes use of The Trivia Api to provide a wide range of questions for its users. By accessing this expansive database of trivia questions, Quizletics is able to offer a diverse range of categories, including history, science, and pop culture, among others. Users can also select the difficulty level of their choice, providing a challenging experience for seasoned quiz-takers or a more relaxed experience for those just starting out.

Quizletics also features a leaderboard on its home page, displaying the top scorers among its users. This leaderboard adds an element of competition to the experience and encourages users to strive for their personal best. Overall, Quizletics is an entertaining and engaging way to test one's knowledge across a variety of topics while also providing a sense of achievement and progress through badges and statistics.

**Project Tracker:**

Link to Project Board: <https://github.com/users/enma9542/projects/1>

Screenshot:



## Demo Video:

[https://www.youtube.com/watch?v=O3kKZqx\\_iLI](https://www.youtube.com/watch?v=O3kKZqx_iLI)

## VCS:

Repository:

<https://github.com/enma9542/recitation-016-team-02-quizletics>

## Contributions:

➤ Will Anderson:

- During this project, I worked on the double dropdown feature which then linked up to the trivia api to allow users to select the category and difficulty of quiz they wanted to take. I also styled the dropdown menu with the coloring and hover

options. I was also able to code and create the profile pictures so that when users want to change profile picture they got to select from 4 options which would update there picture and store it in the users database. After those I wrote up the project report and completed the User Acceptance Testing to ensure that the website was working properly and we got feedback from people this website is intended for.

➤ Madelyn Polly:

- I worked mostly on the backend of this project. I created the database structure for relations *users*, *user\_to\_game*, and *games*. I also created the API for getting individual stats to be shown on the Profile Page. This involved writing queries to sum the time taken on all quizzes, find best score, count the number of games a user has played, and more. I also worked on the backend of updating profile information for username, email, and password, and updating the database each time a user submits a quiz. Finally, I created the login and register APIs and made sure to include checks for seeing if the username already exists and that the password matches the confirm password.

➤ Taya Carlson:

- My main contributions to this project include getting the directory file structure and basic files set up within the repository for my group members to pull, creating the profile.ejs page and doing all of the front-end work there, including creating modal forms, learning Sass along the way to style the profile page, writing and completing tests for the testing lab, deploying the site and completing the deployment lab, updating our minutes of the meeting after our TA meetings, creating our presentation slides, completing the project readme, and debugging in various areas of the project.

➤ Enrique Marroquin:

- In the project, my job was working on the functionality of the quiz page by integrating the Trivia API into our application, making sure that the statistics were sent to the server so that the user could see their real-time statistics, and creating a visually appealing and engaging quiz, implementing various interactive elements such as buttons, correct and incorrect colorization.

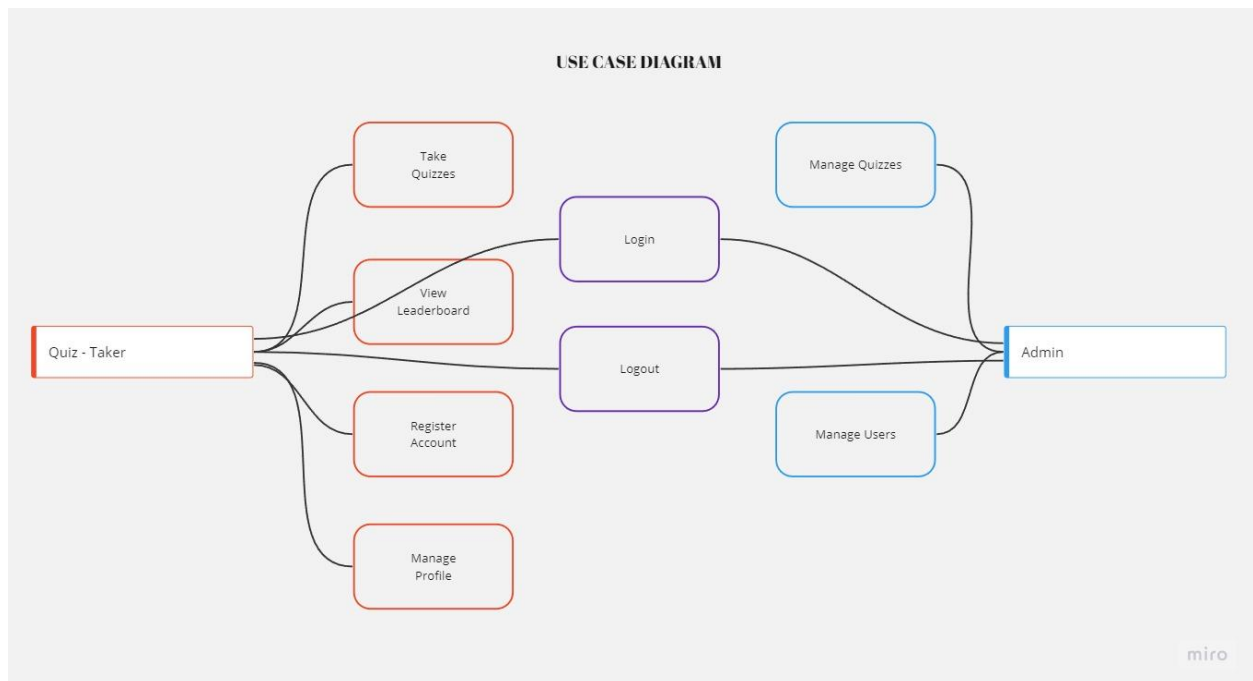
➤ Andrew Pfennigwerth:

- Built and styled the frontend for the nav bar partial, login page, and register page. Setup the Sass preprocessor to make our css more organized. Found and integrated the Trivia api we use for getting question data. Helped Enrique with the styling and functionality of the quiz page.

➤ Anar Enkzhol:

- I mainly worked on the home page and some bug fixes. This meant that I had to update the database with a new *leaderboard* relation, display it on the home page using EJS and style it via SCSS. This proved somewhat challenging as an implementation I previously thought simple had some initial issues displaying the board. I also added the daily Featured Quiz box, worked on some bug fixes, and automated the release notes.

## Use Case Diagram:



## Test Results:

## **Test Cases:**

### **Feature 1: Registration**

This feature allows users to register with a new username and password. The test cases include checking if the user can successfully register with new credentials, if the registration fails when the user provides a username that already exists within the users table of the database, and if the registration fails when the user provides a password within the confirm password field that is different from the password within the password field. The form provides the user with specific feedback regarding the error. The acceptance criteria for this feature include ensuring that the user's credentials do not already exist in the users table within the database, a user cannot submit a form without completing all of the mandatory fields, and information from the form is stored in the users table in the database. Test data for this feature will be composed of site feedback and database entries. The test environment will be controlled, with specific instructions provided to the tester. Test results will pass if the user receives an error message when a duplicate username or mismatching password is entered and when the user registers successfully.

### **Feature 2: Login**

This feature allows users to log in with their existing credentials. The test cases include checking if the user can log in with their existing credentials, if the login fails when the user enters an incorrect username-password pair, and if the form provides the user with specific feedback regarding the error. The acceptance criteria for this feature include ensuring that the user's credentials already exist within the users table in the database and when the user inputs correct credentials, they are logged in and redirected to the home page. Test data for this feature will be composed of site feedback, particularly user interface error messages describing the issue the user is facing if login fails. The test environment will be controlled, with specific instructions provided to the tester. Test results will pass if the user receives an error message when incorrect credentials are entered and if the user logs in successfully with correct credentials.

### **Feature 3: Quiz Page**

This feature allows users to select a quiz, answer questions, and see their score and changes made to their profile stats. The test cases include checking if users are directed to the

appropriate quiz upon selecting one from the list of quizzes, if users are presented with questions and appropriate answers in multiple-choice fashion, if users can select an answer and it automatically submits, and if the user is presented with a summary of their score and any changes made to their profile stats upon finishing all questions. The acceptance criteria for this feature include ensuring that the quiz the user takes corresponds with the one selected within the list and that each quiz question presents the user with the question, one correct answer, and three incorrect answers. Test data for this feature will be composed of site feedback, particularly the summary of the user's score and any changes made to their profile stats. The test environment will be controlled, with specific instructions provided to the tester. Test results will pass if the user is directed to the correct quiz, can answer questions and receive a score, and sees the changes made to their profile stats.

#### **Feature 4: Profile Page**

This feature allows users to view and manage their profile information, including their username, password, profile picture, email, quiz statistics, and achievements. The test cases for this feature include ensuring that the user is directed to the profile page upon login, the user can update their profile information, their quiz statistics and achievements are updated correctly, and the user is notified if they try to change their username to an already taken username. The acceptance criteria for this feature include ensuring that the profile page is filled with user information upon login, the changes to the user's profile information are reflected on the page and in the user's database, and the user can see their first achievement after finishing their first quiz. The test data for this feature will be composed of site feedback and database entries. The test environment will be controlled, with specific instructions provided to the tester. The test results will pass if the user is redirected to the profile page upon login, can update their profile information, their quiz statistics and achievements are updated correctly, and the tester does not encounter any confusion regarding the site's response during any portion of testing.

#### **Observations/Results:**

What are the users doing?

- During testing, users registered for the website by entering a new username and password. He also tried to register with an existing username, which resulted in an error message. They then logged into the website using his existing credentials and selected a quiz to take. They answered the questions in multiple-choice fashion and was presented with a summary of his score and the changes made to his profile stats. They then navigated to the profile page to view and manage his profile information. They updated his profile information, and his quiz statistics and achievements were updated correctly.

What is the user's reasoning for their actions?

- The users' reasoning for his actions was to test the functionality and usability of the website. They wanted to see if the website would allow him to register with new credentials, log in with existing credentials, take a quiz, view and manage his profile information, and update his profile information.

Is their behavior consistent with the use case?

- Yes, users' behavior was consistent with the use case for each feature that he tested. They followed the steps outlined for each feature and was able to perform the intended actions.

If there is a deviation from the expected actions, what is the reason for that?

- There were no deviations from the expected actions during testing.

Did you use that to make changes to your application? If so, what changes did you make?

- Based on my their testing, The main issue we found was with the login navbar option no going away after you are logged in. Since the testing the feature has been fixed, and we now have a login option when not logged in and a logout option when logged in.

- Feature 1 (Registration): The registration feature worked as expected. Users were able to successfully register with new credentials, and the form provided specific feedback regarding any errors. There were no deviations from expected actions, and the feature met all acceptance criteria.
- Feature 2 (Login): The login feature also worked as expected. Users were able to log in with existing credentials, and the form provided specific feedback regarding any errors. There were no deviations from expected actions, and the feature met all acceptance criteria.

- Feature 3 (Quiz Page): The quiz page feature was mostly successful. Users were directed to the appropriate quiz and were presented with questions and answers in a multiple-choice format. However, there were a few instances where users got the same question multiple times, and wondered whether the score system was fair. Overall, the feature met all acceptance criteria.
- Feature 4 (Profile Page): The profile page feature worked well. Users were able to view and manage their profile information, and the page was filled with user information upon login. The feature also correctly updated quiz statistics and achievements. The only issue encountered was when updating profile picture, they had to refresh the page a second time to see the change. Overall, the feature met all acceptance criteria.

Overall, Quizletics performed well during user acceptance testing. There were a few minor issues with the quiz page feature, but overall all the features met all acceptance criteria and performed as expected.

## **Deployment:**

Deployment Link:

<http://recitation-016-team-02.eastus.cloudapp.azure.com:3000/>