

Project Topic

Japanese quiz website that offers interactive quizzes to help aid in the learning of Japanese. There will be exercises such as multiple choice to fill in the blank, and these will be divided into different sections that correspond to the Genki I Textbook.

As of currently VIU Japanese 100/101 uses

https://www.wgtn.ac.nz/lc/lc_resources/genki/index.htm as an additional resource to help aid students with learning Japanese. This website is a bit outdated as it was made in 2008 and can be improved by making new layout improvements and changes. Changes such as keeping track of scores, and checking to see if you have done the quiz previously. This can be a great tool to help students study Japanese.

Goals and Similar Products/Competition

The goal of this project is to provide VIU Japanese students with an additional resource to assist in their study of Japanese using Genki I. It will also allow students to create an account to track their quiz scores and progress. While there are many other Japanese quiz websites available for students, the one provided on the Japanese 100/101 D2L course page is outdated. The website I am creating will be specifically tailored for VIU students and I will be receiving support from Yoichi Mukai, the Japanese professor.

Stakeholders

- **Client:** Students learning Japanese
- **Project Manager:** Angel Pilor (myself)
- **Project Sponsor:** Yoichi Mukai (Japanese professor), Allan McDonald

User Types

- **Guests:** Users without a registered account.
 - Can register for an account
 - Can still take quizzes but scores and progress will not be saved
- **Registers Users:** Users who have a registered account
 - Can login and logout
 - Can reset their password
 - Can change password, email, display name
 - Quiz scores and progress will be saved
- **Teacher:** Users who can update quiz questions
 - Can do everything a registered user can
 - Can edit, create, and delete quizzes and quiz questions

- Can view students quiz scores and progress
- **Administrator:** User in charge of website maintenance
 - Can do everything a teacher can
 - Can update, and delete users

User Stories

1. Registering for an account

- **As a** guest visiting the website
- **I want** to be able to create an account
- **So that** I can keep track of my quiz scores and quiz progress.

Scenario #1: User successfully created an account

- **Given** I am on the homepage of the website
- **When** I click on the "Register: button
- **And** I enter in the required information to register for an account
- **Then** I should receive a confirmation email that verified my email address
- **Then** I should be able to login to the website using my account credentials.

Scenario #2: User already has an account

- **Given** I am on the homepage of the website
- **When** I click on the "Register: button
- **And** I enter in my email address that is already registered
- **And** I submit the registration form
- **Then** I should receive an error message indicating that the email address is already registered
- **And** I should be prompted to login to my existing account or recover my password if I've forgotten it.

Description

When a user visits the website they can choose to register for an account which can help keep track of quiz scores and progress.

Notes

Will need to implement a database which contains user information such as name, email, password, quiz scores, quiz progress. Will also need to implement a way to send a verification email for users to verify their email address to create a verified account.

2. Registered user logging in

- **As a** registered user
- **I want** to be able to login to the website using my email address and password
- **So that** I can access my account information, quiz scores, and quiz progress.

Scenario #1: Successful login

- **Given** I am on the login page of the website
- **When** I enter my registered email address and password
- **And** I submit the login form

- **Then** I should be logged into my account
- **And** I should be able to access my account information, quiz scores, and quiz progress.

Scenario #2: Incorrect email address or password

- **Given** I am on the login page of the website
- **When** I enter an incorrect email address or password
- **And** I submit the login form
- **Then** I will receive an error message saying the email address or password is incorrect

Description

When a registered user visits the website they can login to their account and access their account information, quiz scores, and quiz progress.

Notes

Will need to implement a database which contains user information such as name, email, password, quiz scores, quiz progress.

3. Quiz taking

- **As a user**
- **I want** to be able to take quizzes on the website
- **So that** I can test my knowledge.

Scenario #1: Take a quiz

- **Given** I am on the quiz page
- **When** I click on a quiz
- **Then** the first question of the quiz is displayed
- **And** I can select an answer
- **And** I can submit the answer
- **And** the next question is displayed
- **And** I can keep answering questions until I complete the quiz
- **Then** I will be shown my score
- **And** I can see which questions I got correct and incorrect.

Scenario #2: Save quiz progress

- **Given** I am a registered user taking a quiz
- **When** I click on "Save progress" button
- **Then** my progress on the quiz will be saved
- **And** I can return to the quiz later and continue where I left off.

Description

When a user (registered or guest) clicks on any quiz on the website then they can take the quiz and answer the quiz questions. As a registered user they can also "Save progress" of a quiz so they can continue where they left off.

Notes

Quiz questions will be taken from the Genki I textbook, Genki I workbook, online resources, as well as getting Mukai Sensei to help generate quiz questions.

4. View quiz scores

- **As a** registered user
- **I want** to be able to view my quiz scores on the websites
- **So that** I can track my progress.

Scenario #1: View past quiz scores

- **Given** I have completed at least one quiz
- **When** I navigate to “My Scores” page
- **Then** I will be able to see a list of past quiz scores
- **And** I can see the date of when I took the quiz, the total number of questions on the quiz, and the score as a percentage.

Description

When a registered user clicks on the “My Scores” page they will be able to see past scores of all the quizzes they have taken.

Notes

The database will need to keep track of date and scores of each user's quizzes they have taken and it will be shown as a table.

5. Create quiz categories

- **As a** teacher user
- **I want** to be able to create categories for quizzes
- **So that** I can organize the quizzes.

Scenario #1: Create a new category

- **Given** I am a teacher logged in
- **When** I click on the “Create Category” button
- **Then** I am taken to the “Create Category” page
- **And** I can enter the name, and description of the category
- **And** I can save the category.

Scenario #2: Edit a category

- **Given** I am a teacher logged in
- **When** I click on the “Categories” button
- **Then** I am taken to the “Categories” page
- **And** I see a list of the Categories
- **And** I will be able to click the “Edit” button beside a category
- **And** I can make changes to the name and description of the category
- **And** I can save the changes.

Scenario #3: Delete a category

- **Given** I am a teacher logged in
- **When** I click on the “Categories” button
- **Then** I am taken to the “Categories” page
- **And** I see a list of the Categories
- **And** I will be able to click the “Delete” button beside a category
- **And** I will be prompted to confirm the deletion
- **And** the category is then removed from the website

- **And** all the quizzes in the category are also removed from the website.

Description

When a teacher is logged in they will be able to see the teacher admin panel and they will be able to create, edit, and delete categories for the website.

Notes

Need to create specific permissions for teacher users and design a teacher admin panel.

6. Create a quiz

- **As a** teacher user
- **I want** to be able to create new quizzes on the website
- **So that** I can add new content for users to take.

Scenario #1: Create a new quiz

- **Given** I am a teacher logged in
- **When** I click on "Create Quiz" button
- **Then** I am taken to the "Create Quiz" page
- **And** I can enter in a title for the quiz, a description, add questions, designate the correct answers for each question, and set the category
- **And** I can save the quiz
- **And** publish the quiz for users to take
- **And** it will be listed on the quiz directory of the website.

Scenario #2: Edit an existing quiz

- **Given** I am a teacher logged in
- **When** I click on "Quiz List" button
- **Then** I am taken to the "Quiz List" page where it will list all the quizzes on the website
- **And** I will be able to click on the "Edit" button for a quiz
- **And** I will be able to make edits to the title, description, add or delete questions, edit questions, and the category
- **And** I can save the changes.

Scenario #3: Delete an existing quiz

- **Given** I am teacher logged in
- **When** I click on "Quiz List" button
- **Then** I am taken to the "Quiz List" page where it will list all the quizzes on the website
- **And** I will be able to click on the "Delete" button for a quiz
- **And** I will be prompted to confirm the deletion
- **And** the quiz will be removed from the website
- **And** any quiz scores associated with that quiz will also be removed.

Description

When a teacher is logged in they will be able to see the teacher admin panel and they will be able to create, edit, and delete quizzes for the website.

Notes

Need to create specific permissions for teacher users and design a teacher admin panel.

7. View registered users quiz scores

- **As a** teacher user
- **I want** to be able to view my quiz scores on the websites
- **So that** I can track my progress.

Scenario #1: View specific user's scores

- **Given** I am a teacher logged in
- **When** I select a specific user
- **Then** I can see a list of all the quizzes they have taken
- **And** I can see the quiz title, quiz score, and the date the quiz was taken.

Scenario #2: View all user's scores

- **Given** I am a teacher logged in
- **When** I click on "Quiz List" button
- **Then** I am taken to the "Quiz List" page where it will list all the quizzes on the website
- **And** I can click on a specific quiz
- **And** I can see all the user scores, and the date the quiz was taken of that specific quiz.

Description

When a registered user clicks on the "My Scores" page they will be able to see past scores of all the quizzes they have taken.

Notes

The database will need to keep track of date and scores of each user's quizzes they have taken and it will be shown as a table.

8. Edit user privileges

- **As an** administrator
- **I want** to be able to edit the privileges of users on the website
- **So that** I can control their access to certain features.

Scenario #1: Grant teacher privileges

- **Given** I am an administrator
- **When** I select a user
- **And** I click on "Promote to teacher" button
- **Then** the selected user is granted teacher privileges
- **And** the user can now create, edit, and delete quizzes
- **And** also view user scores.

Scenario #2: Revoke teacher privileges

- **Given** I am an administrator
- **When** I select a user
- **And** I click on "Remove teacher privileges" button
- **Then** the selected user is teacher privileges are revoked
- **And** the user can no longer create, edit, and delete quizzes
- **And** can longer view user scores.

Scenario #3: Delete a user

- **Given** I am an administrator
- **When** I select a user
- **And** I click on then “Delete User” button
- **Then** the selected user’s account is deleted from the website
- **And** the user can no longer login with their credentials
- **And** they can no longer view their quiz scores.

Description

As an administrator I want to be able to grant and revoke user privileges.

Notes

Need to design administrator panel

Technology Background and Resources

For this website I was thinking of using Laravel for this website as I will need to have a working database. I will require hosting for this website as I would like for this website to be hopefully used by the Japanese classes at VIU to help aid in the learning process.

Key Tasks

1. **Setting up the initial project structure:** Installing Laravel, configuring the web server and database, and creating the basic directory structure for the application.
Estimated time needed: 2 weeks
2. **Creating the user authentication and authorization system:** Creating the necessary controllers, views, and models for user registration, login, and logout, as well as implementing the necessary security features such as password hashing and session management. Would also need to create the different user roles and permissions system, like guest, registered users, teacher, and administrator.
Estimated time needed: 4 weeks
3. **Developing the quiz functionality:** Creating the necessary controllers, views, and models for creating, editing, and deleting quizzes, as well as displaying quiz questions and handling quiz submissions. Need to create a system that stores and retrieves quiz results for registered users.
Estimated time needed: 5-6 weeks
4. **Adding the quizzes:** Creating the different quizzes with the help of Mukai-sensei, students who have taken Japanese, and the Genki I textbook.
Estimated time needed: 2 weeks
Possible issues: Creating the quizzes will take a significant amount of time as there will need to be revisions and thorough checking by all parties involved. However this could be started earlier in the timeline.

Limitations and Risks

A big limitation I can see is that I might not be able to implement as many quizzes as I would initially like to in the beginning as setting up and developing the functionality of the website would be the most difficult and time consuming task for this project. Another limitation would be having to properly manage time as my other classes would also have projects I need to work on at the same time as this project.

References

- <https://laravel.com/> - The PHP framework I will be using.
- https://www.wgtn.ac.nz/lc/lc_resources/genki/index.htm - The website I am aiming to recreate/improve.
- <https://www.tofugu.com/> - Good japanese learning resource that I will be utilizing for this project.
- <https://www.figma.com/> - I will be using this website to create the UI/UX design for this project.