

CVWO Mid-term Winter Assignment

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1. Use Cases for the Application

We were tasked to make a web forum in this assignment. A web forum is a place where users can ask/answer questions.

In the web forum each user must have an account which they must login to before being able to view/ask/answer in the forum.

- User Authentication
 - Users must login to their account or register for an account using their email address/username and password
 - Ensure that the password used has at least 8 characters, 1 upper case, 1 lower case and a number
 - Ensure that the username used is unique by comparing with all registered accounts.
 - Users should also be able to update their account information and change password if required by sending a randomly generated code to their email account.

Next is users must be able to CREATE, READ, UPDATE and DELETE (perform CRUD operations on) threads and comments. Furthermore,

- CRUD operations on threads/comments and tag creation
 - Users must be able to CREATE, READ, UPDATE and DELETE threads and comments
 - Users will be linked to threads and comments that they created
 - Users can choose from the given 10 tags to categorize their thread
 - Error Handling: Ensure that all the required parts of the thread are filled up. If not prompt the user, allow them to edit and resubmit the thread creation form
- UI
 - A navigation bar where users can access the search bar, their profile and create new threads
 - In the user profile, users can view their previously posted questions.
 - When users receive a comment on their thread, they will receive a notification

- A logout button for users that are signed in

2. Rails or Go backend.

I will be using Ruby on Rails for my backend. I have no prior experience in both Rails and Go and thus I spent some time researching the pros and cons of both these languages. I settled on using Rails for this assignment since it is developer friendly and easier to learn. Furthermore, it has a more mature ecosystem with multiple libraries with prebuilt functionalities and it prioritizes speed and ease when compared to Go.

3. Other Features

Regarding Account-based authentication I will attempt to use JSON Web Tokens (JWT) and cache the authentication token as a cookie on the frontend after logging in.

For this project I will be using MySQL as my relational database.

Data Requirements for User Registration (* indicates compulsory)

- Username (Check for uniqueness)*
- Email (Check for uniqueness)*
- Url for Profile Picture
- About me section
- Password (need to check for strength)*

Data under User

- Username
- Email
- Url for Profile Picture
- About me section
- Password
- All different threads created
- All different comments created

Data under Threads

- User who created the thread
- Time of creation
- Tag of thread
- Comments under the thread

Data under Comments

- User who commented
- Time of creation
- Comments under this comment