

SW Engineering CSC648/848

RetroHub

Section 01 Team 04

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Milestone 1:	9/27/2023
Milestone 2:	10/11/2023
Milestone 3:	11/01/2023
Milestone 4:	11/29/2023
Milestone 5:	

1) QA testing

I. Unit Test

As of now for, the backend and frontend services required for unit testing are under development and some of the features are still under development as well. Consequently, unit tests will be designed and implemented following the completion of the planned functionalities. However, we have prepared a testing strategy that will be executed once the feature services are fully functional and available.

Selected P1 Features for Testing:

1. User Authentication (Login/Signup)
2. Profile Management
3. Friends List Sidebar Interaction
4. Community Page Video and Chat Features
5. Forum Posting and Commenting

Planned Test Cases:

- Test cases for each feature will be designed to cover all the functional aspects and critical paths.
- Error handling, security, and performance cases will be included.
- The test cases will be available in our GitHub repository under the tests directory once implemented.

Testing Framework:

- The chosen unit testing framework is Jest for its compatibility with our React-based frontend.
- Backend unit tests will be written using Mocha and Chai.

Coverage Goals:

- Functional coverage is targeted at $\geq 90\%$ to ensure most of our functionalities are tested.
- Statement coverage is aimed at $>50\%$, with a focus on critical paths.

II. Integration Test

Test Case ID	Description	Dates Tested	Scenario	Pre-requisites	Test Data	Result
TC01	Verify that a user can register and log in successfully		Navigate to the registration page. Provide valid user details and submit the registration form. Login with the registered credentials.	None	Valid user details	Pass: The user is able to register and log in successfully
TC02	Verify the functionality of posting in forums and commenting on posts.		Create a new forum post. Add a comment to the forum post.	User logged in	Forum post content	Pass: Post and comment are added successfully.
TC03	Check the functionality of sending and accepting friend		Send a friend request to another user. The other user accepts the friend request.	Two registered users	User A sends a friend request to User B	Pass or Fail: User B receives and accepts the friend request.
TC04	Test the ability to create a new community		Navigate to the community creation page. Fill in the required details and create a new community.	User logged in	Community details	Pass or Fail: A new community is created successfully.

TC05	Test the ability to update user profiles		Navigate to the profile settings. Update user details (e.g., bio, profile picture).	User logged in	Updated user details	Pass or Fail: User profile is updated successfully
TC06	Verify the search functionality for users, communities, and forums.		Search for a user. Search for a community. Search for a forum.	Existing users, communities, and forums	Search queries	Pass or Fail: Search results are accurate.
TC07	Ensure that the homepage displays relevant content for the user.		Login as User A. Verify that the homepage displays personalized content.	User logged in, existing content	User A's preferences	Pass or Fail: Homepage displays relevant and personalized content.
TC08	Ensure that the activity page displays information about the user.		Login as a User	User logged in, existing content	Users like, comments and activity	Pass or Fail: Activity page displays relevant and personalized content.
TC09	Check if users receive notifications for friend requests and community activities.		Send a friend request to another user. Join a community.	Two registered users	Friend request, Community join activity	Pass or Fail: Users receive notifications for friend requests and community
TC10						

2) Coding practices:

I. A coding style

Our project adheres to best practices and commonly used conventions to ensure the readability, maintainability, and consistency of our code. These practices include:

- **Descriptive Naming:** We use intuitive and descriptive variable and function names that clearly state their purpose and use.
- **Consistent Formatting:** Code formatting is kept consistent across the project, with a standard use of indentation, line spacing, and bracket placement to enhance readability.
- **Commenting and Documentation:** Code is well-commented, providing explanations for complex logic.
- **Code Reviews:** All code is reviewed by peers before being merged into the main codebase, ensuring that it meets the project's standards for quality.

To enforce these practices, we used code review processes. Our continuous integration pipeline also includes automated linting steps that must pass before merging any changes.