***Condo Management System***

**Testing Plan for Sprint #2**

07/02/2024

**Unit and Integration Testing Tools**

In this project, the technologies we use consist of Next.js framework for both the backend and the frontend. As such, the testing tools must be compatible with these frameworks. Since we will make use of Next.js, and given that it utilises React.js for the front end of our project, the decision for a testing tool to use for unit and integration tests that would be compatible with the technologies is JEST. It is a popular testing framework, providing a “zero-configuration” testing experience. It also has a built-in tool for code coverage which is essential for the purposes of this project.

**Testing Approaches**

The approaches to take in testing the system for this project are varied to ensure that we have an efficient and effective testing plan. For the duration of the project, we will use the Agile methodology to conduct testing iteratively throughout the sprints. In addition, and in line with the Agile method, we will also incorporate Test Driven Development to write tests before the code is written. We will also conduct exploratory tests to increase the user experience by allowing ourselves to test multiple functions of the system simultaneously. Lastly, we will also try to include Continuous Integration to integrate testing into the CI/CD pipeline to catch issues early.

**Metrics and Coverage**

To ensure a proper testing plan for the project, the team will prioritise certain testing metrics. Test pass rate is a testing metric important to ensure the quality of the code written by the team. The test pass rate is essentially the percentage of the passed tests during the development of the system. Another testing metric of our focus is defect density. It is related to the number of found defects per unit of code. We believe that this metric helps the testers to write helpful and efficient tests for the project. Lastly, we will incorporate the concept of code coverage. This metric is important to make sure we are covering most of the code written. This mostly includes methods and the different branches of outputs within each method. As such, we are aiming at a code coverage of at least 80%. We believe that this number is both feasible and a promising ratio for the proper functioning of the system.

**Acceptance Test**

**Acceptance Test for Profile Creation (user story 1):**

**Feature:** Profile Creation

Given I am a public user accessing the profile creation page when I provide a profile picture, a user name, a contact email, and a phone number and I submit the information, then my profile should be successfully created and I should receive a confirmation message.

**Acceptance Criteria:**

-The profile creation page allows the user to upload a profile picture.

-The user must enter a unique username.

-The user must provide a valid contact email address.

-The user must enter a valid phone number.

-Upon submitting the information, the system should create a unique profile for the user.

-The user should receive a confirmation message indicating the successful creation of the profile.

-The created profile should display the provided profile picture, user name, contact email, and phone number.

**Example Test Data:**

Profile Picture: [Upload an image file]

User Name: "JohnDoe123"

Contact Email: "john.doe@example.com"

Phone Number: "+1234567890"

**Acceptance Test for Dashboard Display (User Story 4):**

**Feature:** Dashboard Display

Given I am a condo owner logged into the system and I navigate to the dashboard, I should see general information about my properties, including personal profile, condo information, and financial status.

**Acceptance Criteria:**

-The dashboard should be accessible to condo owners upon logging into the system.

-The dashboard should display personal profile information of the condo owner.

-The dashboard should provide information about each property owned by the condo owner, including condo details.

-The financial status section should include relevant financial information such as dues, payments, and balances.

-The displayed information should be accurate and up-to-date.

-The dashboard should have a user-friendly layout for easy navigation and readability.

**Example Test Data:**

Condo Owner: "JaneSmith"

Personal Profile: [Display personal information]

Condo Information: [Display details of owned properties]

Financial Status: [Display financial information]

**Acceptance Test for Property Profile Creation (User Story 7):**

**Feature:** Property Profile Creation

Given I am a representative of the condo management company logged into the system and I navigate to the property profile creation page. Given I provide essential information such as property name, unit count, parking count, locker count, and address and I submit the information, then a profile for the property should be successfully created And I should receive a confirmation message.

**Acceptance Criteria:**

-The property profile creation page should be accessible to authorised representatives of the condo management company.

-The property name provided should be unique for each property profile.

-The unit count, parking count, and locker count should be numeric values representing the corresponding quantities for the property.

-The address field should accept valid address information.

-Upon submitting the information, the system should create a unique profile for the property.

-The user should receive a confirmation message indicating the successful creation of the property profile.

**Example Test Data:**

Property Name: "Sample Condo"

Unit Count: 100

Parking Count: 50

Locker Count: 20

Address: "123 Main Street, Cityville, State, ZIP"

**Acceptance Test for Condo Files Upload (User Story 8):**

**Feature:** Condo Files Upload

Given I am a representative of the condo management company logged into the system and I navigate to the file upload section for a specific property, given I upload condo files such as declarations, annual budgets, and board meeting minutes, then the files should be successfully uploaded and associated with the property and all condo owners should have access to these files.

**Acceptance Criteria:**

-The file upload section should be accessible to authorised representatives of the condo management company.

-The system should allow the upload of various file types, including declarations, annual budgets, and board meeting minutes.

-Uploaded files should be associated with a specific property.

-Condo owners for the respective property should have access to the uploaded files.

-The system should support versioning or date stamps for files to track updates over time.

-The file upload process should handle valid file formats and sizes.

**Example Test Data:**

Property Name: "Sample Condo"

**File Types:**

Declaration: [Upload a PDF file]

Annual Budget: [Upload a spreadsheet file]

Board Meeting Minutes: [Upload a text document]

**Acceptance Test for Detailed Information Entry (User Story 9):**

**Feature:** Detailed Information Entry

Given I am a representative of the condo management company logged into the system and I navigate to the detailed information entry section for a specific property, I provide information for each condo unit, parking spot, and locker, including unit size, owner information, and associated condo fees. Then I submit the detailed information for each unit, parking spot, and locker should be successfully entered and associated with the property.

**Acceptance Criteria:**

-The detailed information entry section should be accessible to authorised representatives of the condo management company.

-The system should allow the entry of detailed information for each condo unit, parking spot, and locker.

-The information for each unit should include unit size, owner information (name, contact details), and associated condo fees.

-The information for each parking spot and locker should include relevant details and associations.

-Upon submitting the information, the system should store and associate the detailed information with the respective property.

-The entered information should be accurate and reflect the current state of each condo unit, parking spot, and locker.

**Example Test Data:**

Property Name: "Sample Condo"

Condo Unit Information:

Unit Size: 1000 sq. ft.

Owner Information: "John Doe," "johndoe@example.com"

Condo Fees: $500/month

Parking Spot Information:

Parking Spot Number: P001

Owner Information: "Jane Smith," "janesmith@example.com"

Condo Fees: $50/month

Locker Information:

Locker Number: L001

Owner Information: "Alex Johnson," "alexjohnson@example.com"

Condo Fees: $10/month