

# Recipe Shop Test Plan

| Change Log |             |             |                    |
|------------|-------------|-------------|--------------------|
| Version    | Change Date | By          | Description        |
| 1.0.0      | 2024/10/04  | All members | Initial test plan  |
| 2.0.0      | 2024/10/27  | All members | Sprint 2 test plan |
| 3.0.0      | 2024/12/04  | All members | Final test plan    |

## 1.Introduction

### 1.1 Scope

The scope of testing for sprint 3:

1. Search Feature
  - Get a list of recipes based on keyword(required), cooking time(optional) and meal type(optional)
  - View individual recipes in the list
  - Match saved recipes with existing ingredients
2. User Account Management
  - Create account
  - Sign in to account
  - Log out of account
3. Recipe Management
  - Add recipes to favorite list
  - Remove recipes from favorite list
  - View individual recipes in the list
  - Upload original recipes to the forum
4. Grocery List generation
  - Generate a grocery list from favorite recipes list

## 1.2 Roles and Responsibilities

| Name             | GitHub Username | Role                            |
|------------------|-----------------|---------------------------------|
| Meixuan Chen     | njzfjiang       | Front End Developer, QA Analyst |
| Densson Zhu      | zhude2          | Back End Developer              |
| Troy Thomas      | TroyT21         | Back End Developer, QA Analyst  |
| Ifeanyi Ochiagha | Francis518      | Back End Developer              |

### Role Details:

1. Front End Developer: Developer focusing on creating UI and components.
2. Back End Developer: Developer focusing on creating the logic layer and connecting to APIs and Database
3. QA Analyst: Responsible for creating tests and maintaining the quality of the software when there is an update in the project.

## 2. Testing Methodology

### 2.1 Test Levels

**Core Feature:** Search Feature

User story: As a user, be able to search for recipes based on my preference.

### Unit Tests:

1. Make sure the search button is visible on the homepage.
2. Make sure the user can click search to go to the search page.
3. Make sure the user can enter keywords on the textbox input.
4. Make sure the user can enter min cooking time and max cooking time.
5. Make sure the user can select the meal type.
6. Make sure the user cannot submit the query without a keyword specified.
7. Make sure the user can click to view individual recipes.
8. Make sure individual recipes display relevant information.
9. Make sure the server responds with search results for a search request.
10. Make sure the server responds with recipe info for a recipe request.

11. Make sure the server responds with error if searching for non-existent recipes.

**Integration Tests:**

1. Make sure that clicking the search button sends a GET request to the API.
2. Make sure after a successful GET request(keyword is provided, state is 200), a list of related recipes are shown on the screen.
3. Make sure after an unsuccessful GET request, an error message is shown on the screen.
4. Make sure a loading message shows when the recipes are loading or no query has been submitted.

**Acceptance Tests:**

1. (Manual) As a user, I am able to search for recipes based on my preference.

Steps:

1. Given I am the role of a guest user(not logged in).
2. Open the Recipe Shop Home page.
3. Click on the "Search now" button.
4. Select "Breakfast" for the meal type.
5. Enter 0 in the left input field for cooking time.
6. Enter 10 in the right input field for cooking time.
7. Enter "Eggs" for the keyword textbox.
8. Click "Search"
9. A list of recipes related to "Eggs" with their respective images show up on the screen, indicating a successful search.

User story: As a user, be able to get a list of recipes matching to the ingredients I have and the cooking methods available to me.

**Unit Tests:**

1. Make sure the user can input an ingredient
2. Make sure the search bar correctly separates recipe name and recipe ingredients

**Integration Tests:**

1. Make sure filter is correctly applied

**Acceptance Tests:**

1. (Manual) As a user, I am able to search by ingredients in my favorite recipes

Steps:

1. Given I am a user and have recipes favorited.
2. Open the Favorites Recipes page, by clicking Manage.
3. Enter an ingredient in brackets in the search bar. Like (egg).
4. Verify that the recipe that shows up contains the given ingredient
5. Verify that other recipes that do not contain the ingredient are filtered out.

**Core Feature:** User Account Management

User story: As a user, be able to create account with valid username and password

**Unit Tests:**

1. Make sure the user can input the username.
2. Make sure the user can input the password.
3. Make sure the Register button can be clicked.
4. Make sure the Sign in button can be clicked.
5. Make sure the form does not submit with empty fields.

**Integration Tests:**

1. Make sure the user can register with a unique username and correct, matching passwords.
2. Make sure an error message shows if the user is unable to register(error occurred in API request).
3. Make sure if the username is not unique, the registration will fail.

**Acceptance Tests:**

1. (Manual) As a user, I am able to register with valid username and password  
Steps:
  1. Given I am a user and I have no account registered for Recipe shop.
  2. Open the Recipe Shop Home page.
  3. Click on the Register now link.
  4. Enter a unique username.
  5. Enter a valid password(only strings allowed).
  6. Enter the same password again in the repeat password field.
  7. Click "Register".
  8. The Application redirects the user to the login page, signifying a successful register.

User story: As a user, be able to sign in to my account with correct username and password

**Unit Tests:**

1. Make sure the user can input the username.
2. Make sure the user can input the password.
3. Make sure the Register button can be clicked.
4. Make sure the Sign in button can be clicked.

5. Make sure the user cannot sign in with an empty username or an empty password.

**Integration Tests:**

1. Make sure user can sign in with correct, matching username and password
2. Make sure the user cannot sign in with a username and password that does not match.

**Acceptance Tests:**

1. (Manual) As a user, I am able to sign in to my account with correct username and password

**Steps:**

1. Given I am a user with a registered account for Recipe Shop.
2. Open the Recipe Shop homepage.
3. Click the Sign in button on the top left of the navbar.
4. Enter the correct username and password.
5. Click the Sign in button under the textboxes.
6. The application redirects the user to the home page, signifying a successful register.

User story: As a user I want to be able to log out of my account.

**Unit Tests:**

1. Make sure log out button appears and can be clicked
2. Make sure when a user is logged in, they can log out.
3. Make sure guest users cannot access favorite recipes and create grocery list features when not logged in
4. Make sure logged in users can access favorite recipes and create grocery list features.

**Acceptance Tests:**

1. (Manual) As a user I want to be able to log out of my account.

**Steps:**

1. Given I am a registered user of Recipe Shop, when I am logged in.
2. I can see my username appear on the right most corner of the navbar in the format "Hello, username".
3. Click the "log out" button on the Navbar
4. Observe an alert showing "logging out" appears.

5. Click “ok” to close the modal, and observe that the username on the right most corner of the navbar changes to “Hello, guest”, signifying a successful logout.

### **Core Feature: Recipe Management**

User story: As a registered user, be able to add & delete recipes to my favorites

#### **Unit Tests:**

1. Make sure when the user is logged in, the user can click the manage button to go to the Favorite recipes page.
2. Make sure logged in users can add a specific recipe to the favorites list.
3. Make sure logged in users can remove a specific recipe from the favorites list.
4. Make sure logged in users can remove all recipes from the favorites list.
5. Make sure logged in users can search/filter for saved recipes in the favorites list.
6. Make sure guest users cannot access the favorites page.

#### **Integration Tests:**

1. Make sure the favorites list generates the correct list of saved recipes for the logged in user.
2. Make sure the user can view individual recipes in the saved list by clicking the title of the recipe.

#### **Acceptance Tests:**

1. (Manual) As a registered user, be able to add & delete recipes to my favorites  
Steps:
  1. Given I am a registered user for Recipe Shop, when I am logged in.
  2. Navigate to the home page.
  3. Click “Search” to go to the search page.
  4. Enter “Beef” for search keyword and click “search”
  5. Click the first recipe in the list.
  6. Click “Add to favorites” to add the recipe to favorites.
  7. Navigate to the home page.
  8. Click “Manage” to go to the favorites list page.
  9. Observe that the beef recipe appears in the list.
  10. Click the title to view the saved recipe.
  11. Click “Remove from Favorites”.
  12. Navigate to the favorites list page and observe the recipe has been removed.

User Story: As a registered user, be able to upload my original recipes on to the forum

**Unit Tests:**

1. Make sure the /recipe/upload endpoint returns 201 when filled in with correct information
2. Make sure the /recipe/upload endpoint returns 409 when missing data
3. Make sure the /recipe/upload endpoint returns 500 for malformed data
4. Make sure the /recipe/upload endpoint returns 404 when the user is null
5. Make sure the /all-uploads/:username endpoint returns 200 in normal condition
6. Make sure the /all-uploads/:username endpoint returns 404 when no user is found
7. Make sure the /all-uploads/:username endpoint returns 500 when there is error
8. Make sure the /uploads/:recipeID endpoint returns 204 in normal condition
9. Make sure the /uploads/:recipeID endpoint returns 404 when the recipe is not found.
10. Make sure the /uploads/:recipeID endpoint returns 500 when an error occurred
11. Make sure the /is-uploads/:recipeID endpoint returns 200 with correct information
12. Make sure the /is-uploads/:recipeID endpoint returns 200 with correct information

**Integration Tests:****Acceptance Tests:**

**(Manual)** As a registered user, be able to upload my original recipes on to the forum

1. Given I am a registered user and I am logged in on the Recipe Shop Home page
2. Click on the "Upload My Recipe" button.
3. Input correct values for the fields: "Recipe Title", "Recipe Author", "Ingredients" and "Instructions".
4. Add an image size less than 976 kb.
5. Click on the "Upload Recipe" button.
6. Click on "My Recipes"
7. Observe that the recipe uploaded appears in the list, signifying a successful upload.

**Core Feature:** Grocery List generation

User story: As a user, be able to get a grocery list for the ingredients after selecting recipes

**Unit Tests:**

1. Make sure the button to generate a list appears
2. Make sure that a list is generated when a valid request is sent
3. Make sure that an error is returned if no user is specified
4. Make sure an error is returned if user is found, but has no favorite recipes
5. Make sure an error is returned if no user is found

**Integration Tests:**

1. Make sure that, when a user is logged in, the user can click the generate list button and have a list be generated in a new tab
2. Make sure that the browser displays an appropriate error when the user blocks the popup
3. Make sure that the browser displays an error when there is an error getting data from the database
4. Make sure that the browser displays an error when there is an error getting data from Edamam

#### **Acceptance Tests:**

1. (Manuel) As a registered user, be able to generate a list of ingredients based on the favorite recipes.

Steps:

1. Given I am a registered user with at least 1 favorited recipe.
2. Navigate to the home page
3. Click "Select Recipes from favorites" or "Manage" to go to the Favorite List page.
4. Verify there is at least 1 favorite recipe that appears below.
5. Click "Generate List"
  - a. If your browser block popups, you may have to enable them
6. Verify and observe that the ingredients for your favorite recipe(s) show up on the new page

**Regression Tests:** All unit tests and integration tests will run before a push or pull request to the main branch.

## 2.2 Test Completeness

Tests will be completed when:

1. 80% class coverage
2. All automated and manual test cases passed

## 3 Resource & Environment Needs

### 3.1 Testing tools

**General Tools:**



GitHub Actions

GitHub issues for bug tracking

Testing Library:

- Jest
- Supertest
- mockingoose

### **Front End:**

Developer Tools (Chrome)

Libraries:

- React testing library
- React test renderer
- Axios mock adapter
- Jest

## 3.2 Testing Environment

Minimum Hardware:

- Windows 10 or Mac OS

Required Software

- Node js 20.+
- Chrome Browser

## 4 Terms & Acronyms

| Term/Acronyms | Definition                        |
|---------------|-----------------------------------|
| API           | Application Programming Interface |
| QA            | Quality Assurance                 |
| UI            | User Interface                    |