CP317 Final Project Documentation

Project: Food Recipe App

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Feasibility Analysis

Introduction:

The proposed app aims to provide users with recipes based on their search query, making it easier for users to find and cook meals. In this feasibility analysis, we will evaluate the potential success of the recipe app by analyzing technical, economic, and operational factors.

Technical Feasibility:

The development of a recipe app is technically feasible since there are many recipe databases available to source recipes from such as the API being used (Free Meal API | TheMealDB.com). Additionally, there are many third-party tools available to support the development of the app. Therefore, the technical feasibility of the recipe app is **high**.

Economic Feasibility:

To evaluate the economic feasibility of the app, we must consider the cost and revenue aspects. The development cost of the app depends on the complexity of the app, its features, and its functionality. The app must also generate enough revenue to cover its development cost and generate profits. There are various revenue models available, such as in-app advertisements, premium subscriptions, and referral programs. However, the app's success will depend on its ability to attract a large user base and retain them. Therefore, the economic feasibility of the app **is moderately feasible**.

Operational Feasibility:

The operational feasibility of the recipe app is high. The app's operation requires a small team of developers, designers, and testers to manage the app's development, maintenance, and updates. The recipe app can be integrated tools for user analytics, database management, and payment processing. The operational cost will be lower than the development cost, and the app can be scaled up to support a large user base.

Conclusion:

Based on the feasibility analysis, the recipe app has a **high technical feasibility and operational feasibility**. However, its economic feasibility **is moderately feasible**, and its success will depend on its ability to attract a large user base and generate revenue to cover its development cost and generate profits. Therefore, further market research and business analysis are necessary to evaluate the potential success of the app.

Software Process Model Used

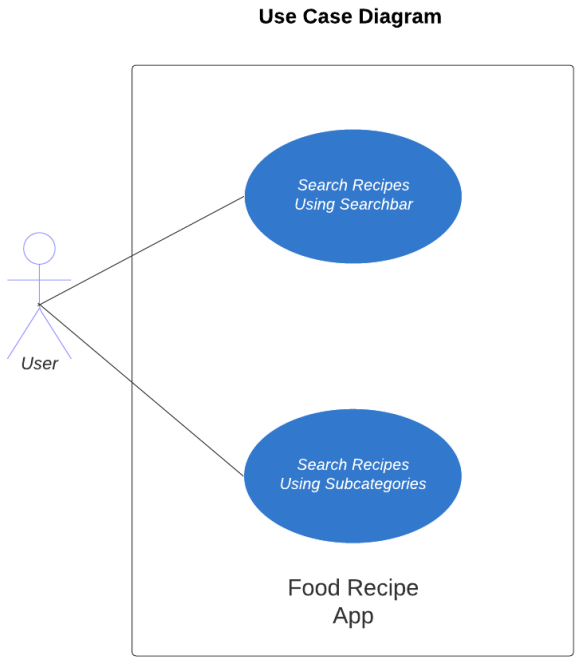
We used the Waterfall Model as it had a linear structure and encouraged us to complete each phase before moving on to the next one.

Requirement specification document

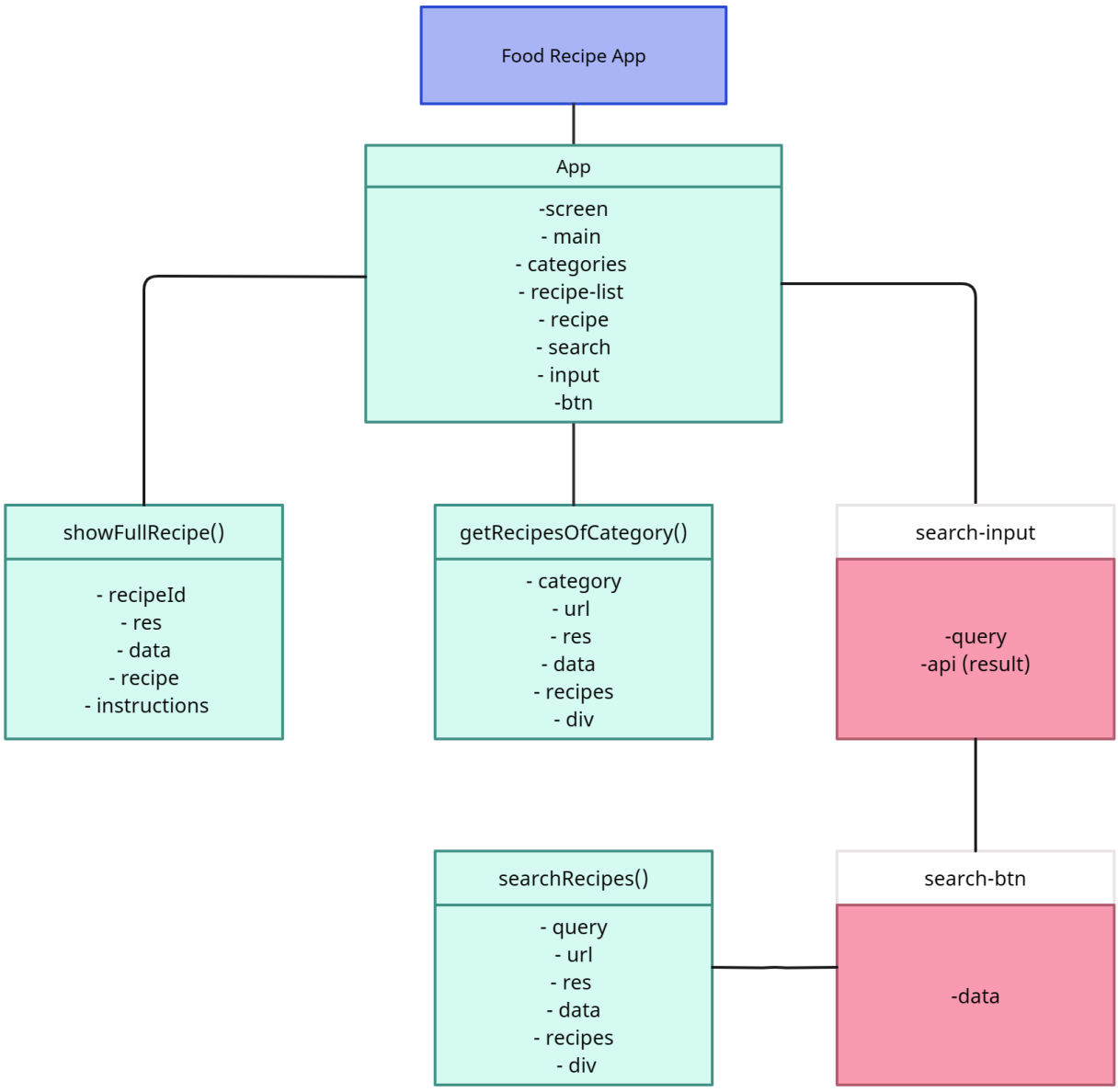
(Seperate File)

Relevant UML Diagrams

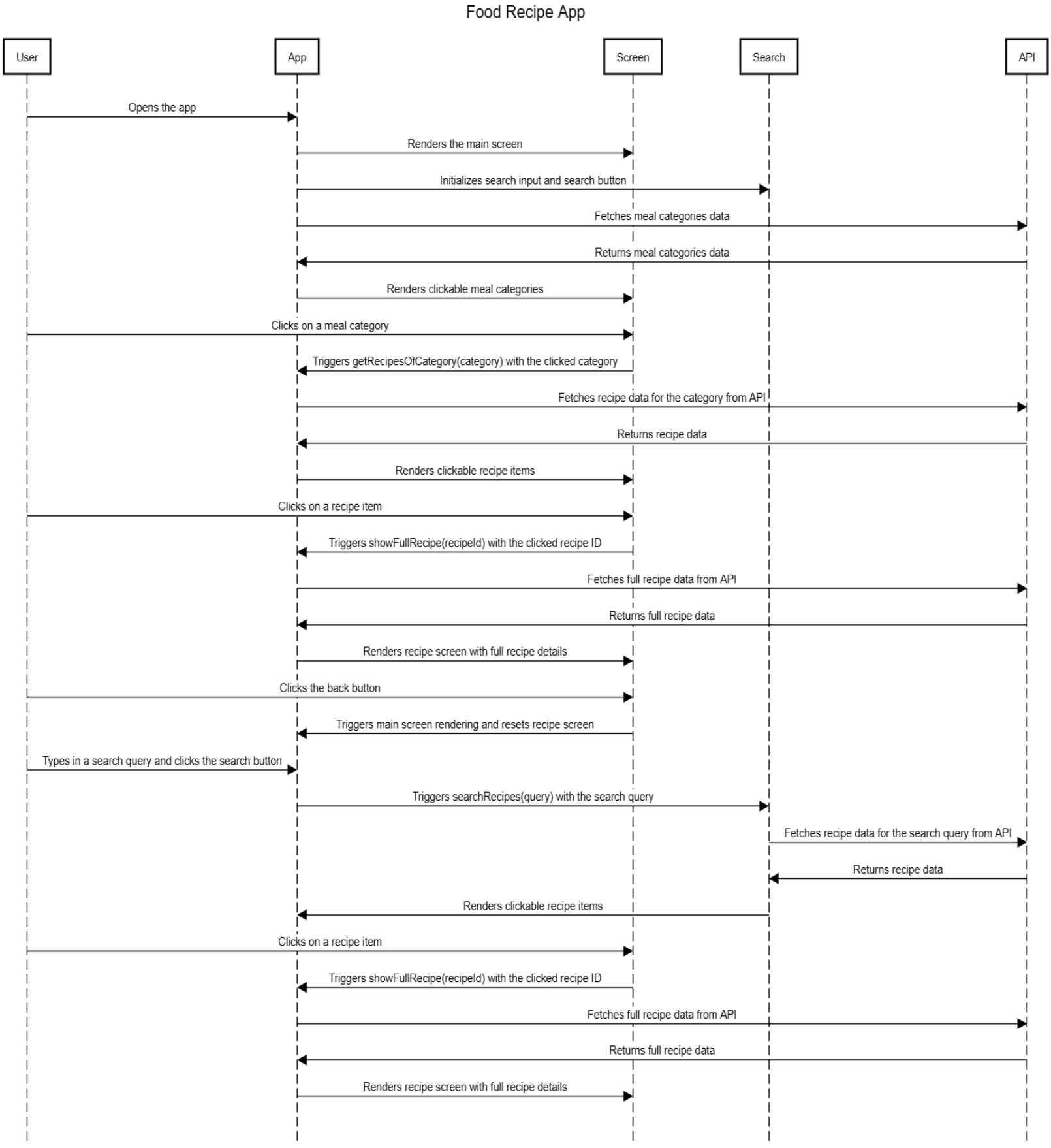
Use Case Diagram



Object Diagram

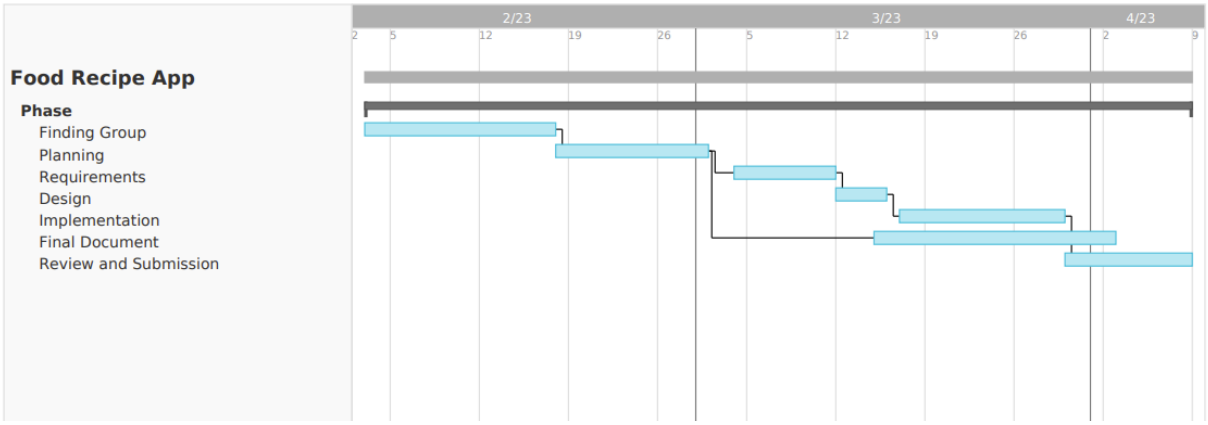


Sequence Diagram



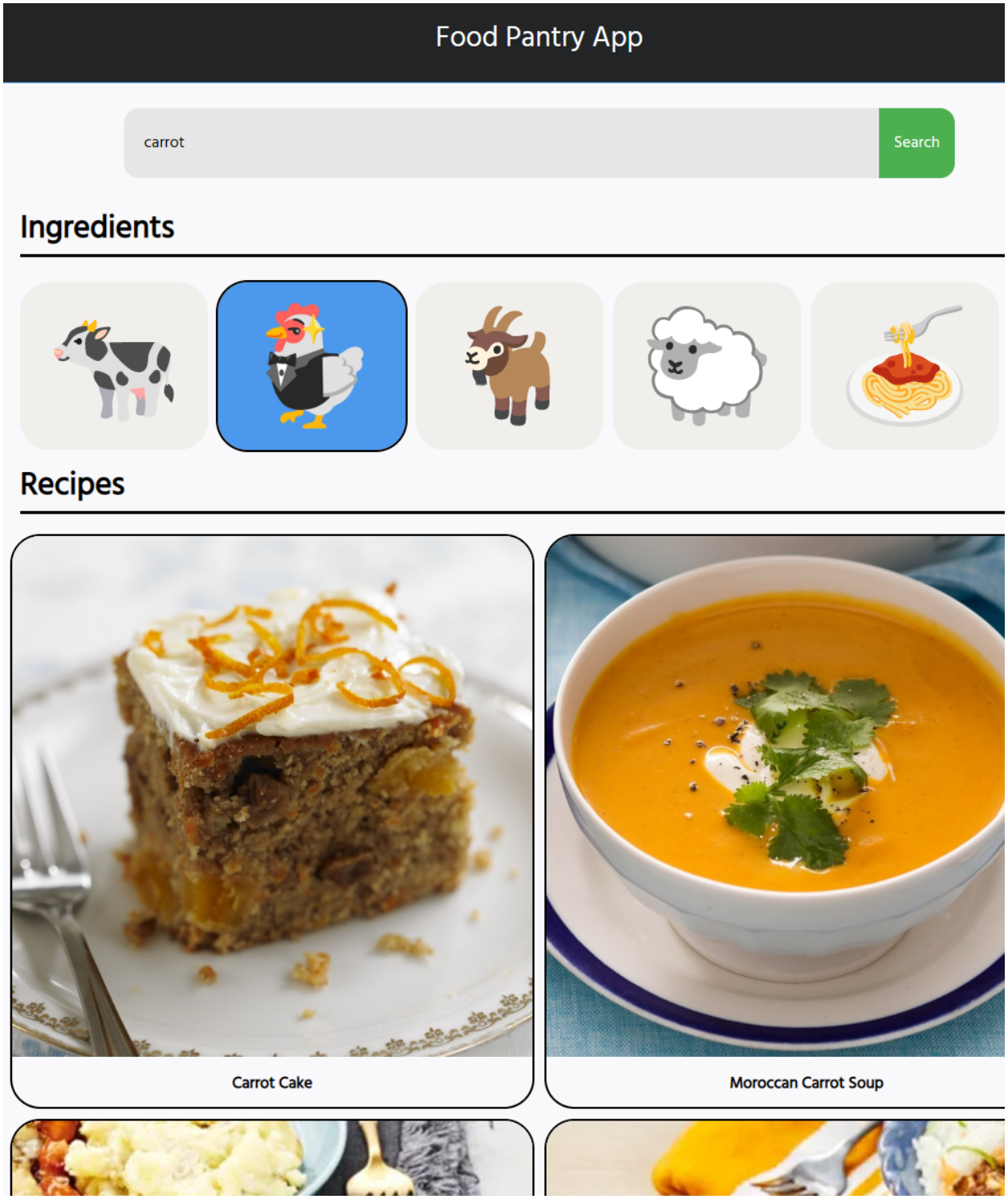
Gantt Charts/Activity Charts, or PERT charts to help demonstrate project planning

Gantt Chart



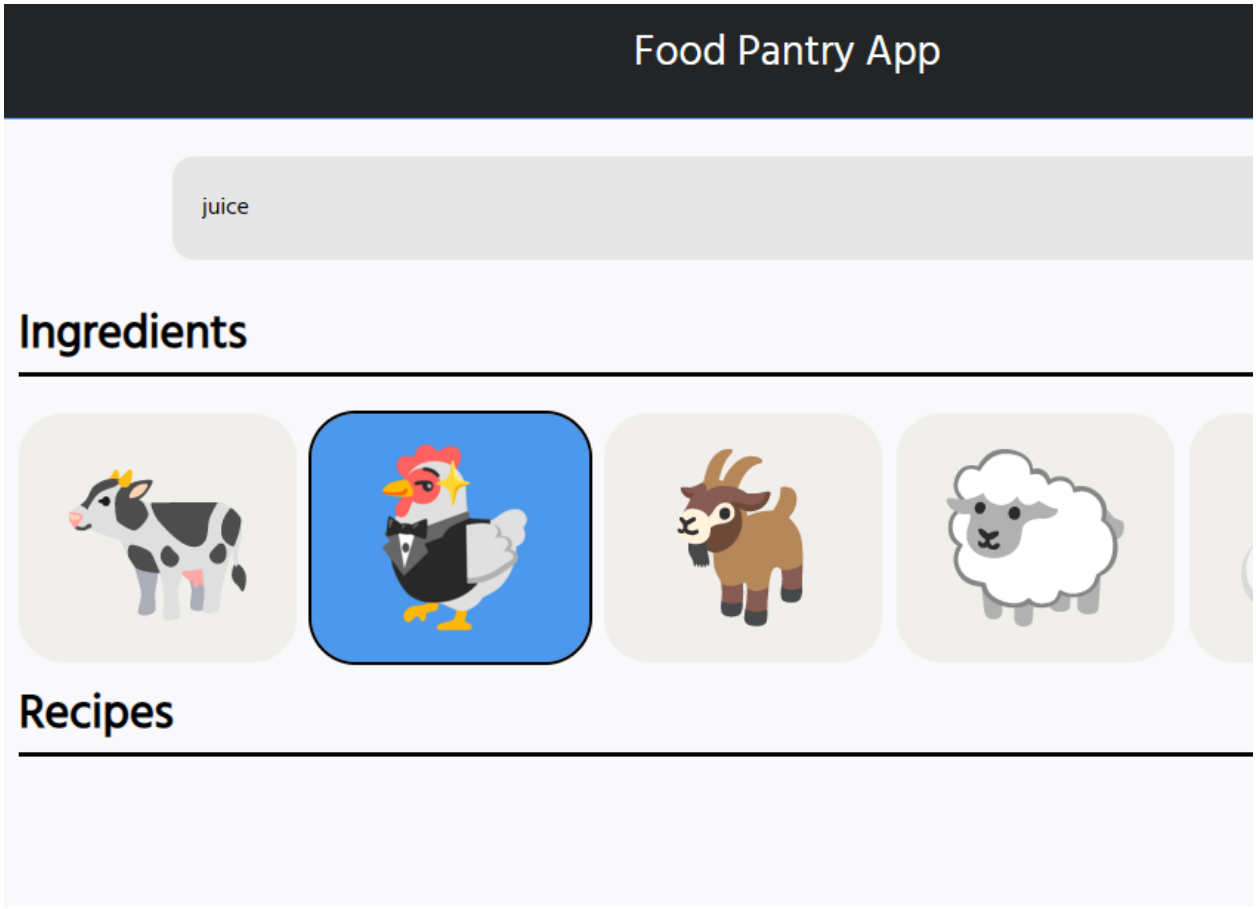
Test suites with complete descriptions of the input, output, and test cases

Case 1: “carrot” as input



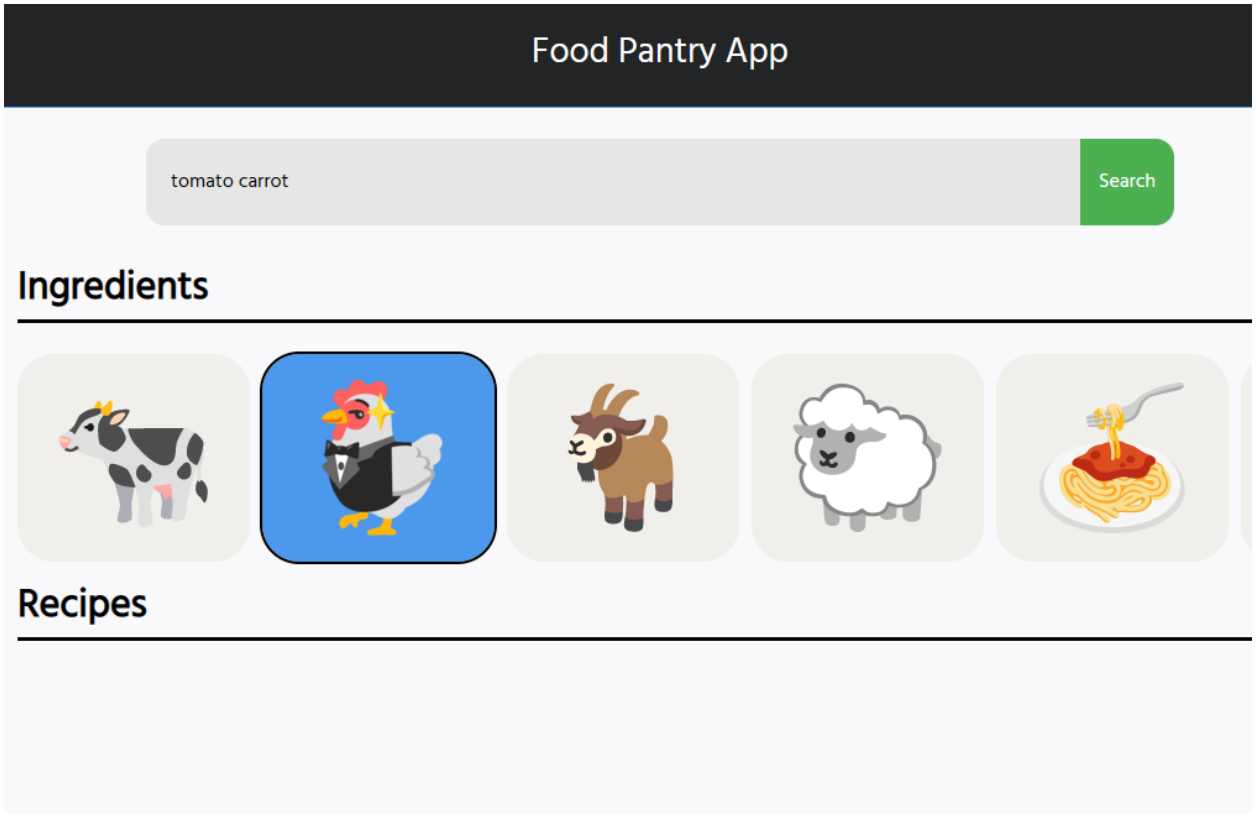
Test Case Type	Description	Test Step	Expected Result	Status
Functionality	This test case is designed to verify that the recipe search system returns multiple recipes containing "carrot" as an ingredient or in the name when "carrot" is entered as input.	1. Enter "carrot" as input in the recipe search bar. 2. Click on the search button. 3. Check if the search results show multiple recipes containing "carrot" as an ingredient or in the name.	The recipe search system should return multiple recipes containing "carrot" as an ingredient or in the name.	Pass

Case 2: “juice” as input



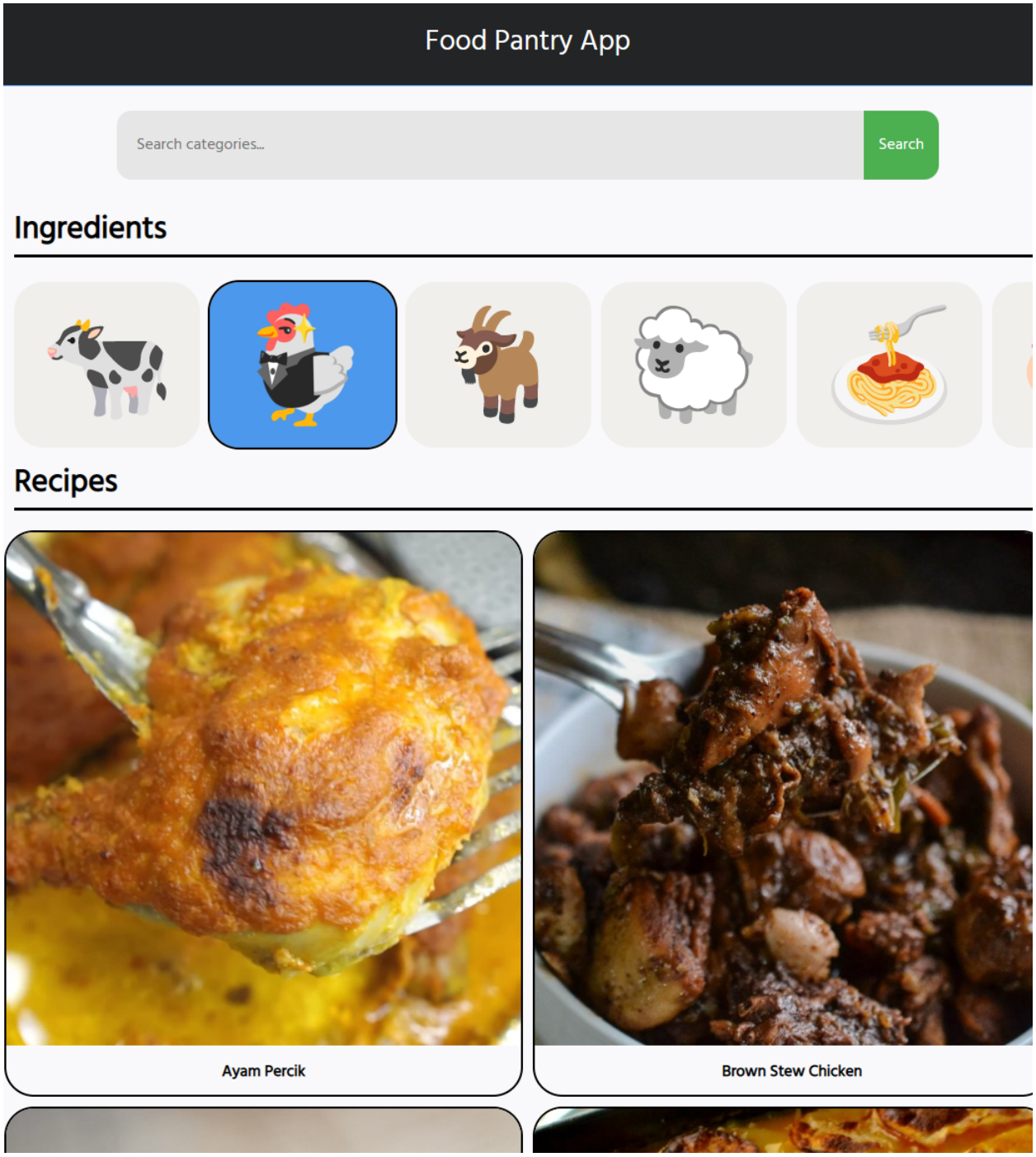
Test Case Type	Description	Test Step	Expected Result	Status
Functionality	This test case is designed to verify that no recipes are displayed when the search input does not match any recipes.	1. Enter "juice" as input in the recipe search bar. 2. Click on the search button.	The application displays a blank page with no recipes listed.	Pass

Case 3: “tomato carrot” as input



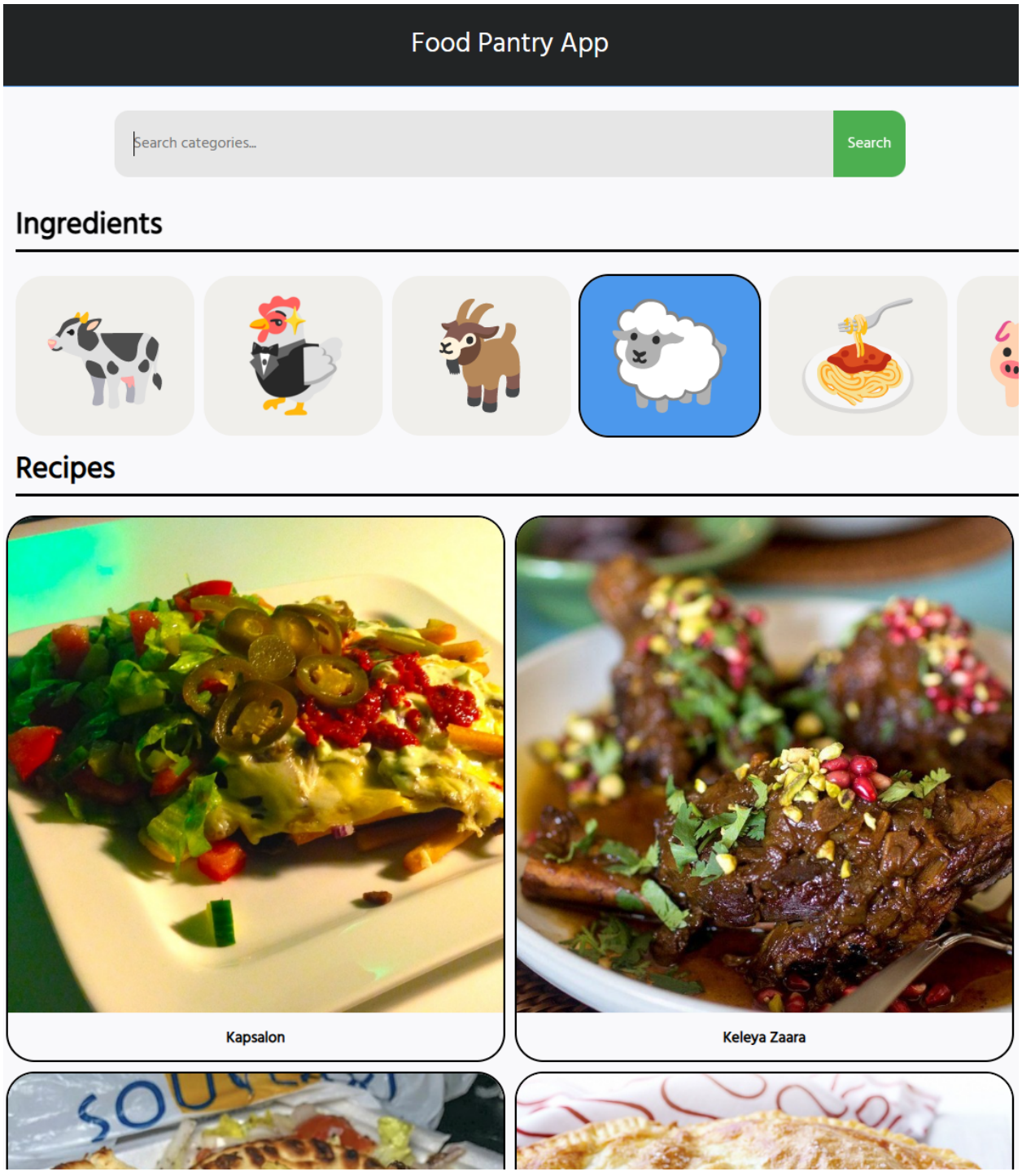
Test Case Type	Description	Test Step	Expected Result	Status
Functionality	Test if the program can handle a recipe with two names and still provide results from the API.	1. Input "tomato sauce" in the search bar 2. Click the search button 3. Check if any recipes are displayed	The program should display recipes containing tomato and/or sauce, even if the recipe has two words in its name	Failed Explanation: The API used by the program does not support searching for recipes with two-word names. As a result, the program is not able to display any results for the search query "tomato sauce".

Case 4: Testing the category buttons



Test Case Type	Description	Test Step	Expected Result	Status
Usability	Test the usability of the category buttons that return recipes with that category.	1. Click on the "Breakfast" category button. 2. Verify that the page refreshes and displays recipes related to breakfast. 3. Click on the "Lunch" category button. 4. Verify that the page refreshes and displays recipes related to lunch. 5. Click on the "Dinner" category button. 6. Verify that the page refreshes and displays recipes related to dinner. 7. Click on the "Dessert" category button. 8. Verify that the page refreshes and displays recipes related to dessert.	1. The page should refresh and display recipes related to breakfast. 2. Recipes related to breakfast should be displayed. 3. The page should refresh and display recipes related to lunch. 4. Recipes related to lunch should be displayed. 5. The page should refresh and display recipes related to dinner. 6. Recipes related to dinner should be displayed. 7. The page should refresh and display recipes related to dessert. 8. Recipes related to dessert should be displayed.	Pass

Screenshots of the Project Output



Food Pantry App

Search categories... Search

Ingredients





Recipes

Brown Stew Chicken

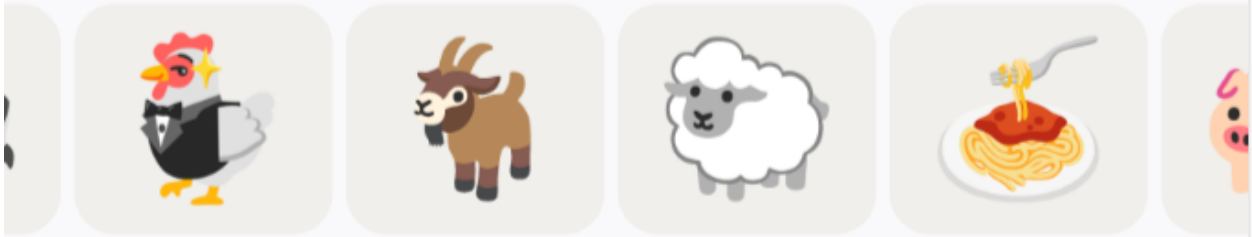
Callaloo Jamaican Style


Food Pantry App

cake

Search

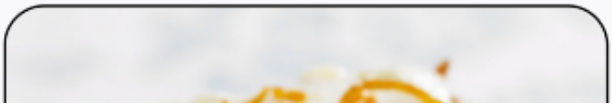
Ingredients



Recipes

Pancakes

Rock Cakes



Software Requirements Specifications Document

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Table of Contents

1. Introduction

1.1 Purpose

Our Food Recipe App enables users to find recipes by filtering them based on whatever ingredient they want.

The purpose of this document is to show the functions of the Food Recipe App and how it is expected to perform under different circumstances. The features of the application, its reactions to user input, and constraints will all be explained in this document.

1.2 Project Scope

This Food Recipe App will be useful as a tool for users to find recipes based on particular ingredients. It will do this by:

- Letting users filter recipes by typing in ingredients in the search bar.
- Letting users filter recipes by clicking one of the subcategory tags.

1.3 Definitions, Acronyms, and Abbreviations

Searchbar: the search bar where users will type in the ingredient they want to filter the recipes by.

Tags: the tags that contain subcategories that the users will click on to filter recipes by.

1.4 References

The references used to help make this document:

Charlie, Charles et al. (2004, April 15th). “Software Requirements Specification”. Michigan State University.
https://www.cse.msu.edu/~cse435/Handouts/SRSExample-webapp.doc

Slide 71, Lecture Slides: Week 4.

2. Overall Description

2.1 Product Perspective

The Food Recipe App allows users to find recipes. It gets its recipes from a database with hundreds of recipes. So the users have a lot of options that they can choose from.

2.2 Product Functions

The main function of the product involves a search bar in which the user can enter one ingredient based on which the application will output 15 recipes that it gets using the API. The other way a user can shortlist recipes is by clicking on the tags that list some major ingredients and subcategories like “Chicken”, “Fish”, “Beef”, “Breakfast”, “Dessert”, and so on.

2.3 User Characteristics

The application can be used by a range of users from simple amateur cooks to just about anyone who would like to browse some recipes.

2.4 Constraints

The user can only input one ingredient at a time in the search bar. The functionality to include multiple ingredients could be added in the future.

The program will use an API for getting the recipes.

2.5 Assumptions and Dependencies

The product depends on an API for its recipes. It outputs a shortlist of recipes from the API based on the ingredient inputted by the user.

It is assumed that the API works properly.

3. Specific Requirements

3.1 External Interfaces

The application uses an API to gather the recipes.

3.2 Functional Requirements

If the user enters an ingredient in the search bar, the system outputs 15 recipes containing the ingredients pulled using the API.

If the user clicks on one of the sub-categories, the program outputs a shortlist of 15 recipes gathered using the API.

3.3 Performance Requirements

Our Food Recipe App can be run easily with any modern computer or mobile-device. Both functions only take a few seconds to complete.

3.4 Quality Attributes

Flexibility of the program could be increased in the future by including the ability for the search bar to accept multiple ingredients.

Usability of the program could be increased later with a more modern GUI.