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Milestone 0: Project Setup and Proposal

The Recipe Finder Web App

By Group 17: Sunsets Organization

Project Overview:

- The Recipe Finder Web App is designed to make finding and cooking recipes easier for users. It brings together multiple APIs to help users search for recipes, check nutritional information, and watch video tutorials for cooking.

- This app solves the problem of spending too much time searching for the right recipes. It allows users to filter based on ingredients, dietary preferences, or simply watch a video tutorial to learn new cooking techniques. The idea came from recognizing how difficult it can be to balance meal planning, cooking, and nutritional tracking, and it aims to provide a simple solution for people who want to cook better and more efficiently.

- The potential users for this app include chefs, fitness trainers, parents, and students. Each group has different needs that the app addresses: chefs can find creative recipes, fitness trainers can track nutritional information, parents can get meal ideas based on what's in their pantry, and students can watch videos to learn how to cook. This app makes cooking and meal planning easier, saving time and effort for everyone.

Persona + Specific User Stories:

- **Chef**
    - **Persona Details: (Bob)** - Bob is a professional chef who runs an exotic restaurant. Currently, he is looking to try out new exotic dishes and see which ones he can put on his menu.

    - **User Stories:**
        - Spoonacular API (Recipe Search)
            - As a chef, Bob wants to be able to search for recipes that are unique and can test his skills.

        - Spoonacular API (Recipe Information)
            - As a chef, Bob would like to be able to see the ingredients that are needed in the recipe he wants to recreate in his restaurant.

- **Nutritionist:**
    - **Persona Details: (Sarah)** - Sarah is a nutritionist with many clients looking for advice. She needs to do research on recipes and meals that are nutritious so that she can recommend them to her clients.

    - **User Stories:**
        - Edamam Nutrition API (Nutrition Description)
            - As a Nutritionist, Sarah wants to find out the nutritional information of a recipe. Sarah would like to filter out the ingredients and see the health benefits. She does this in order to find a balanced diet for his clients.
        - Edamam Nutrition API (Meal Recommendation)
            - As a Nutritionist, Sarah wants to get quick meal recommendations that suit her clients' diets.
        - Edamam Nutrition API (Recipe Lookup By Dietary Needs)
            - By seeing Sarah’s clients’ needs in their diets, she wants to be able to look for recipes that fit their diets so that she can recommend them to them.
        - Spoonacular API (Meal Planner)
            - Sarah wants to create a meal plan to help her set up meals for her clients.
- **Busy Parent:**
    - **Persona Details: (Mary)** - Mary is a busy parent with not much time to plan out her meals for her family. She wants to be able to quickly know what meal she should make next and have it varied.

- **User Story:**
  - TheMealDB API (Meal Recommendations)
    - As a busy parent, Mary would like to be able to get meal recommendations so she can quickly find out what are some good meals to make for her family.
  - TheMealDB API (Filter Meal By Ingredient)
    - Mary wants to filter recipes for ingredients that she already has at home.
  - TheMealDB API (Meal Categories)
    - As a busy parent, Mary wants to explore the meal categories so that she can make varied meals for her family.

- **College Student**
  - **Persona Details: (Mark)** - Mark is a college student who has never cooked in his life. He would like to be able to learn how to cook through online tutorials.

  - **User Stories:**
    - YouTube Data API (Video Search)
      - As a college student, Mark would like to be able to find videos that can help him learn how to cook.
    - YouTube Data API (Cooking Playlist)
      - Mark wants the tutorials he watches to be in a playlist format so that when he goes back to watch them, they are on a list grouped together.
    - YouTube Data API (Saving Video)
      - As a college student, If Mark finds a cooking tutorial that he likes and wants to go back to, he would like to be able to save the video for later.

Chosen APIs:

1. Spoonacular API: This API has a large collection of various recipes, ingredients and nutritional meals from all around the world. We can search and get detailed cooking instructions for the recipe that we want.
2. TheMealDP API: This API also provides access to all types of recipes around the world. Users can search up recipes by name, ingredient or category, and importantly, we can get images from all the dishes.
3. Edamam Nutrition API: This API mostly focuses on nutritional data that allows users to search up, and provides a detailed breakdown of each recipe based on the user's dietary needs.
4. Youtube Data API: Youtube API is the largest database of videos content including cooking and instruction videos. It allows users to search up cooking tutorials, and save relevant cooking videos based on their prevalence. With personalized video recommendations, users can also find similar recipes that fit their diet.

Features Explanation + General User Stories:

1. Spoonacular API Features:
    - Search Recipes by Nutrients:
        - As a user, I want to search for recipes based on the nutrition that I need for my diet.
    - Get Recipes Information:
        - As a user, I want to see the nutritional information for each recipe so that I can track my calories intake more efficiently.
    - Meal Planner:
        - As a user, I want to have a clear plan for my diet, so having a clear and well-organized plan would be beneficial for my goals.

2. TheMealDB API

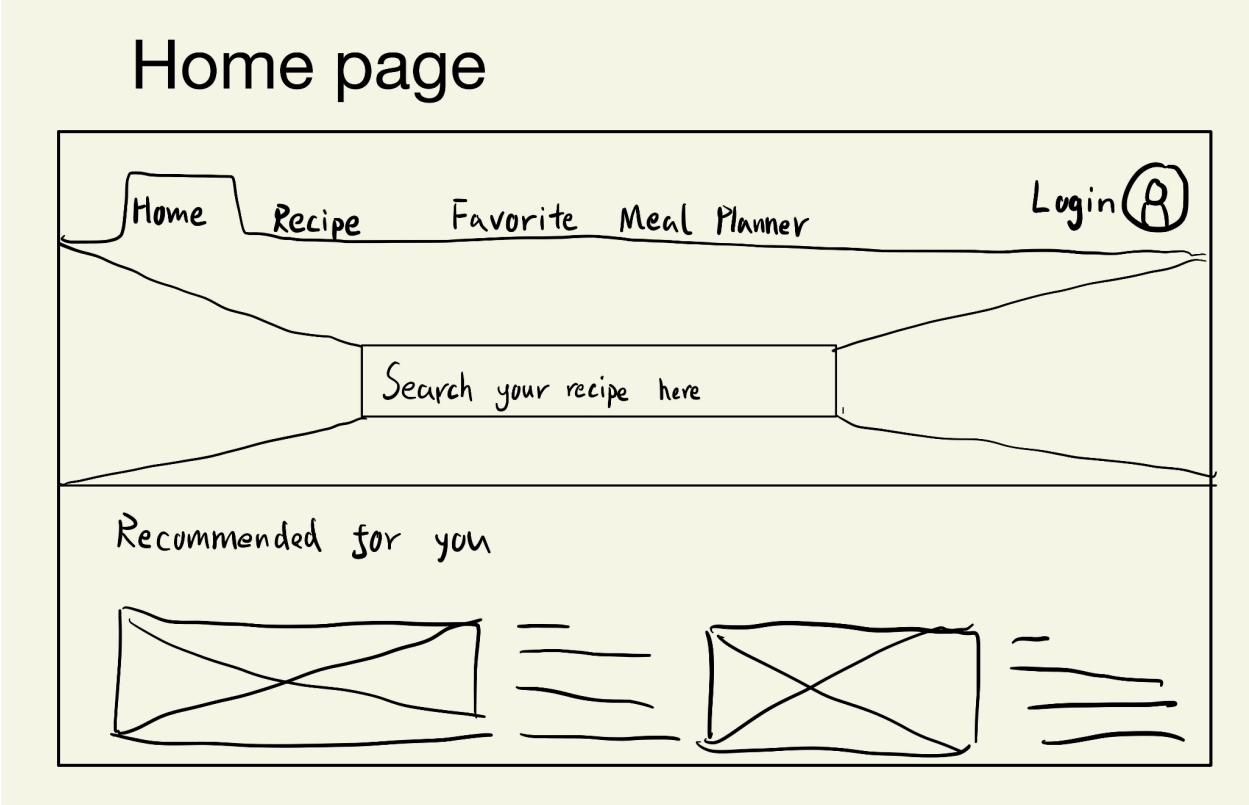
- Filter meal by main ingredient:
    - As a user, I want to search for recipes based on the ingredients I have so that I can avoid food waste.
- Search meal by name:
    - As a user, I want to search for a specific meal by name so that I can quickly find the recipe I want to make without wasting too much time.
- List all meal categories:
    - As a user, I want to see a list of meals based on categories so that I can cook different types of meals that fit with my diet.

3. Edamam Nutrition API Features:
    - Nutrition description
        - As a user, I want to be able to find out the nutrition description of the meals I find. This is so that I can ensure that it fits my diet.
    - Recipes lookup by dietary needs
        - As a user, I want to find recipes where I can filter for a dietary need. With this, I am able to find only recipes that I am able to eat.
    - Meal recommendation
        - As a user, I want to be able to receive meal recommendations, in order to know what I should eat for my next meal quickly or if I want to have a meal recommended to me based on my diet.

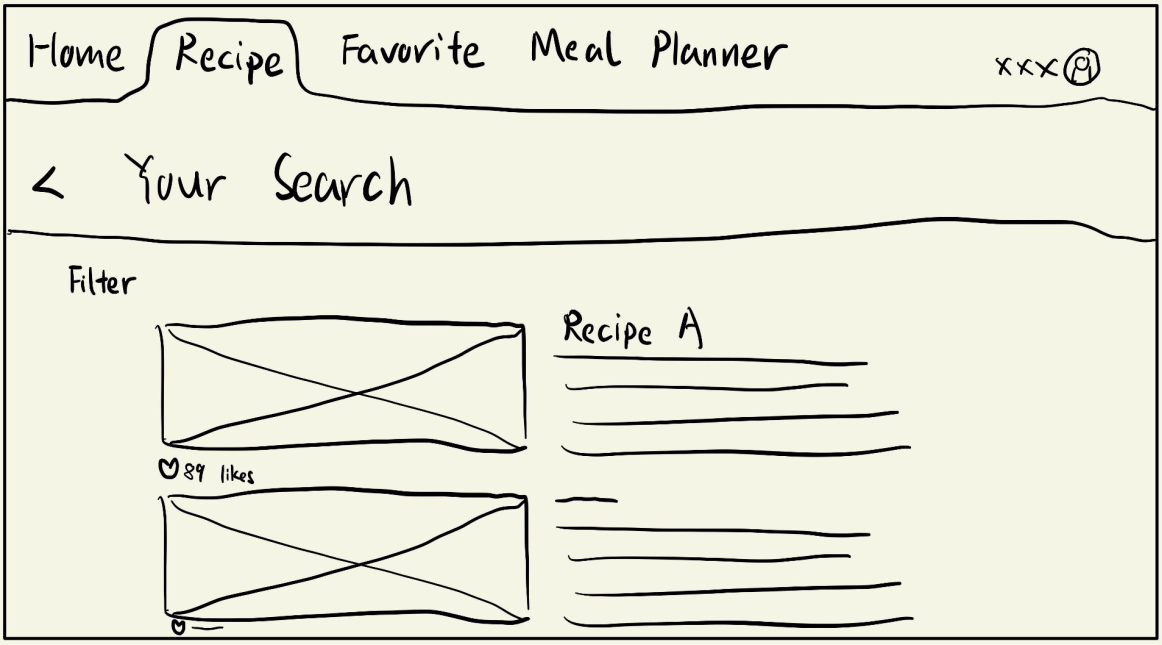
4. Youtube Data API Features:
    - Show video tutorial for selected recipes:
        - As a user, I want to watch video tutorials on the recipes that I want to cook and moreover, so I can learn new cooking techniques.
    - Cooking playlist feature
        - As a user, I want to have video tutorials on the recipes I want to cook to be in a playlist. With this, I can group the ones I like together and watch them on a list.
    - Save cooking videos

- As a user, I want to save my favourite recipe tutorials that I have watched so I can refer to them later If I am making the same recipe again.

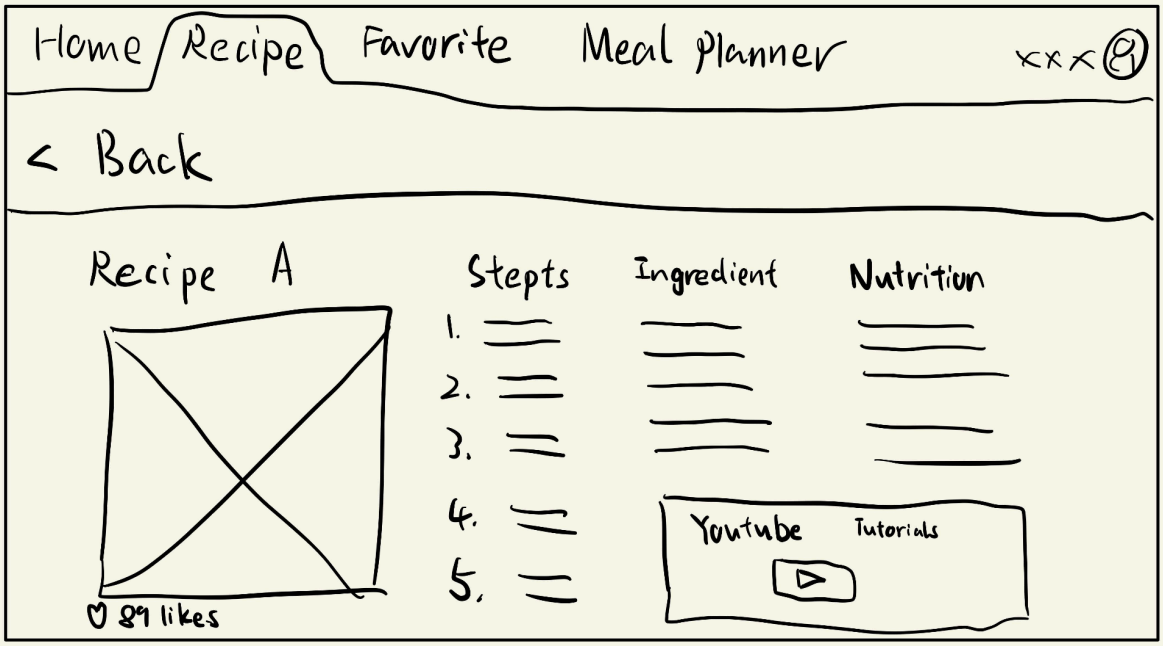
Application interface/features



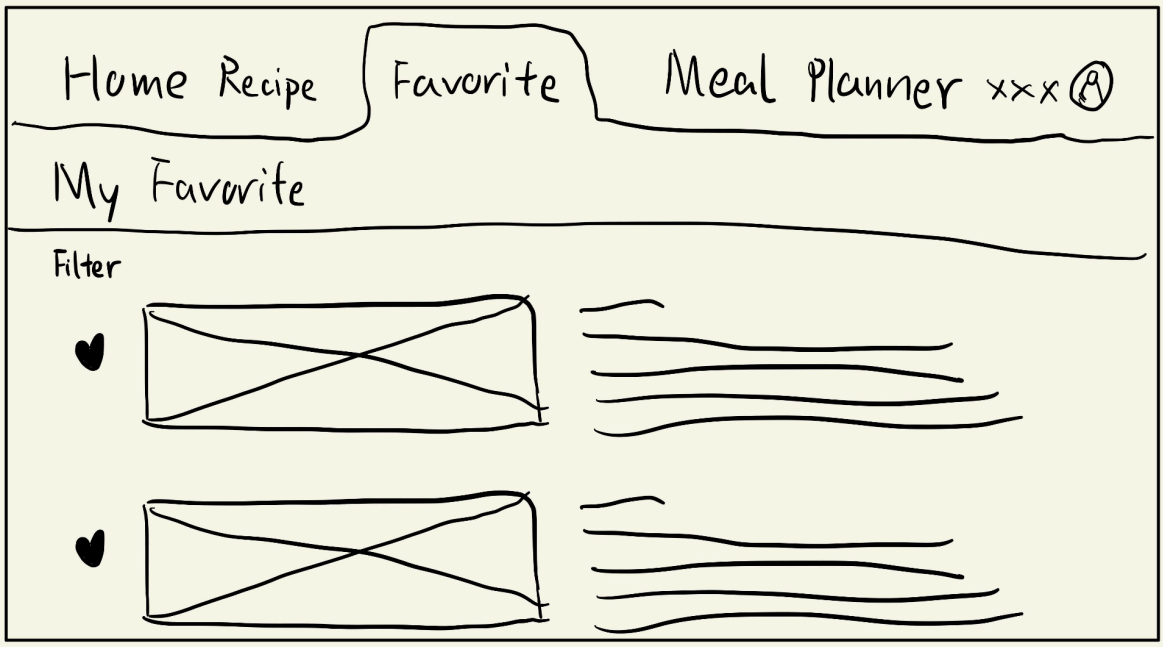
Recipe Search



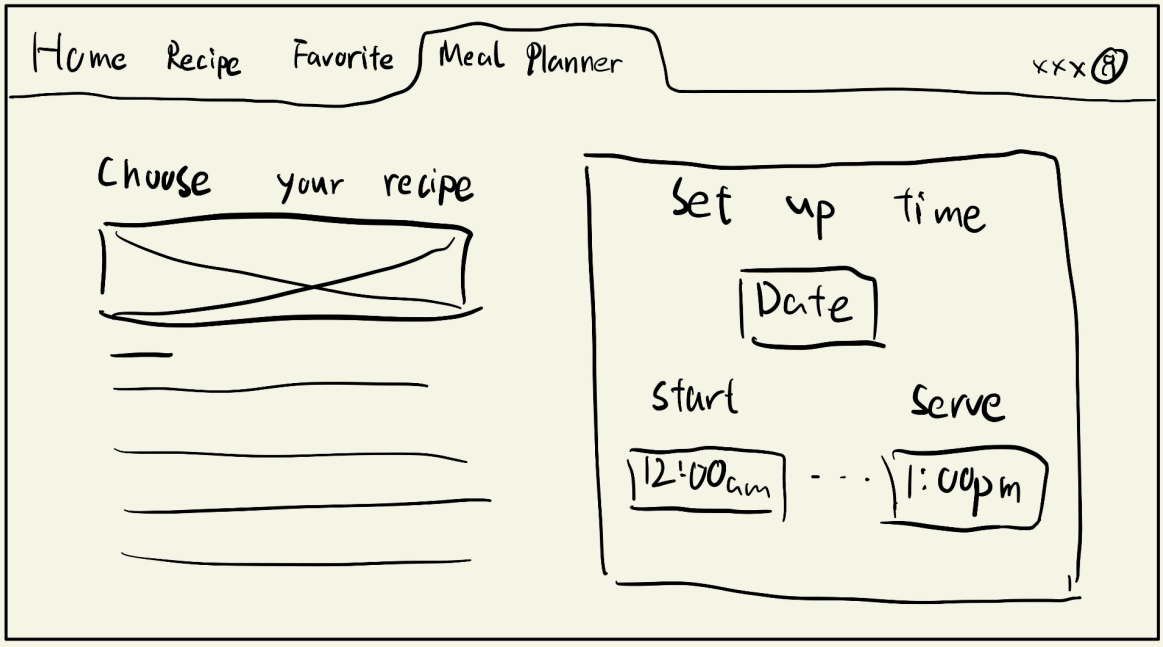
Recipe

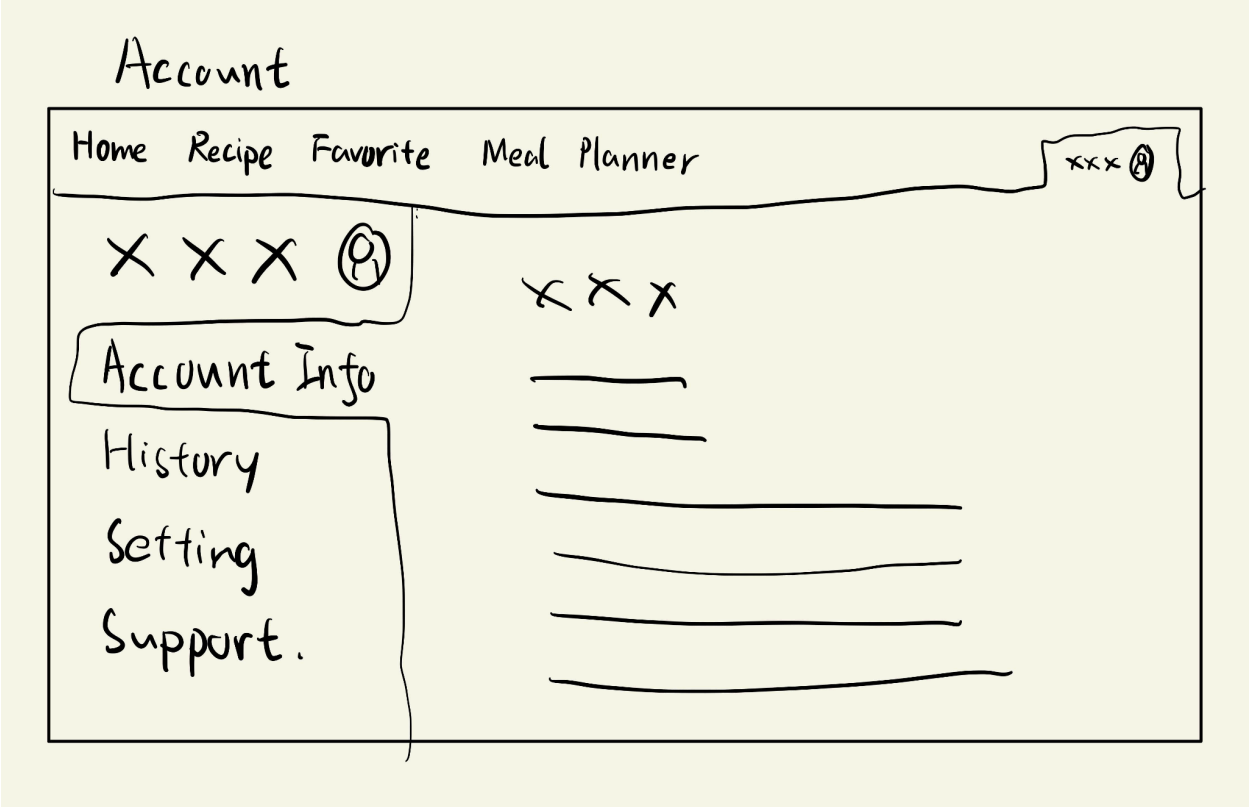


Favorite page



Meal Planner





Front-end Tech Stack:

1) HTML, CSS:
    a) HTML structures the content of the web pages and CSS makes the interface visually appealing and responsive across different devices.
    b) Together, they provide a simple foundation for building consistent and accessible user interfaces.

2) JavaScript:
    a) JavaScript enables user interactions like searching recipes by ingredients, filtering meals, and saving videos.
    b) It makes the interface dynamic by handling user input in real time, such as when users look up recipes based on dietary needs (Edamam API) or search by meal name (TheMealDB API).
    c) JavaScript works alongside React to efficiently manage user interactions and API requests, enhancing the app's responsiveness.

3) React.js:
    a) React allows us to create a component-based structure, ensuring that features like search bars, recipe lists, and video playlists can be reused and updated independently.
    b) React enables smooth navigation between pages (like switching between meal planners and video tutorials) using React Router.
    c) It supports quick rendering of API responses, such as nutritional data and recommended meals, ensuring an intuitive and responsive user experience.

4) Express.js and Node.js:
    a) Even though the project has no back-end (database), Express.js and Node.js will handle API requests securely.
    b) These technologies allow us to store API keys on the server side, preventing exposure to users and ensuring security.
    c) Express will act as a middle layer between the front-end and APIs, helping us efficiently fetch recipe data, nutritional details, and tutorial videos.