EatsEazy

Product description

Project Overview

* Project Type: Web Application
* Project Team: Daniyal, Arun, Enrico, Asad

2. Problem Statement

Many people, especially those new to fitness, struggle to create personalized meal plans that align with their fitness goals. There are many helpful tools that help with this but are not located in one area, scatter. The aim of this project is to bring together all tool and with this we will be offering customized meal plans based on user fitness data.

This project can be extended to be a food blog app that allows individuals to share their own recipes and interact with existing posts by reviewing and altering posted recipes. **(this extension needs to be discussed with the team)**

3. Project Objectives

**Primary Goal**

Develop a **customized meal planning feature** for users based on:

* Height, weight, gender, and fitness goals (e.g., weight loss, muscle gain, maintenance).

Implement a **recipe suggestion feature** where users can input ingredients they have, and the system recommends recipes that minimize food waste.

**Secondary Goals**

* Ensure the website has an intuitive user interface (UI) and excellent user experience (UX).
* Provide basic nutrition tracking for users to monitor calorie and macronutrient intake.
* Ensure the platform is responsive and accessible on both desktop and mobile devices.

**Scope**

* **Phase 1: Core Features set deadlines( )**
  + User registration, profile setup (collecting height, weight, gender, goals).
  + Personalized meal plan generator.
  + Ingredient-based recipe suggestions.
* **Phase 2: Enhancements**
  + Advanced features like nutrition tracking and progress reports.
  + Social sharing or saving recipes.
* **Out of Scope** (for now)
  + Integration with external fitness trackers.
  + Native mobile app (focusing on a mobile-friendly web app initially).

**Tech stack**

React For building dynamic, interactive user interfaces, tailwind CSS styling framework, Node.js with Express.js: A popular choice for building scalable and fast back-end servers using JavaScript.  MongoDB: A NoSQL database, good for flexible data storage, especially if recipe/meal data is complex and changes frequently.

User Authentication: Firebase Authentication **(need to discuss with group.**

**Helpful API’s**

Tesco API, Open Food Facts UK API, Super cook API

Deliverables, Zesty (UK-Based), Yummly API (UK Localized), BBC Good Food API, TheMealDB API (UK Recipes Included)

**User Stories**

User Registration and Profile Setup

1. As a new user, I want to create an account using my email address and a password, so that I can access personalized features on the website.
2. As a new user, I want to set up my profile by entering my height, weight, gender, and fitness goals, so that the meal plans can be tailored to my needs.
3. 39. As a user, I want to get notifications about seasonal or trending recipes so that I stay up to date with what’s popular.
4. As a user, I want to view the nutritional information (e.g., calories, protein, fats) for each recipe so that I can make informed decisions about my diet.
5. As a user, I want to filter recipes by calorie count so that I can stay within my daily calorie goals.

User interaction

1. As a user, I want to submit my own recipes so that others can enjoy them.
2. As a user, I want to rate and review recipes so that I can help others decide which dishes to try.
3. As a user, I want to comment on recipes or alter measure or processes so that I can share my experiences or ask questions.
4. As a user, I want to edit or delete my recipe submissions so that I can update them if needed.
5. 25. As a user, I want to like or bookmark recipes so that I can save my favourites for future use.

Personalized Meal Plans

1. As a user, I want to receive a personalized meal plan based on my profile information, so that I can meet my fitness goals.
2. As a user, I want to view a daily and weekly breakdown of my meal plan, so that I can plan my meals in advance.
3. As a user, I want to be able to adjust my meal plan by indicating preferences (e.g., vegetarian, allergies), so that I receive suggestions that suit my dietary needs.
4. As a user, I want to share my meal plan with friends or family so that we can plan meals together.
5. As a user, I want to receive automated meal plans based on my dietary preferences and available time, so that I don’t have to manually plan everything.

Recipe Suggestions

1. As a user, I want to input ingredients I already have, so that the website can suggest recipes to help reduce food waste.
2. As a user, I want to filter recipes by dietary preferences (e.g., vegan, gluten-free), so that I can find suitable recipes quickly.
3. As a user, I want to see nutritional information for each recipe, so that I can track my calorie intake.

Shopping List Generation

1. As a user, I want to generate a shopping list for all ingredients needed for a selected recipe, so that I can easily buy what I need.
2. As a user, I want to customize the shopping list by removing ingredients I already have at home, so that I can avoid unnecessary purchases.
3. As a user, I want to download or print the shopping list, so that I can take it with me when I go shopping.
4. As a user, I want to filter recipes by ingredient availability so that I can find recipes based on what I already have.

Favourites and Meal Logging

1. As a user, I want to save my favourite recipes to a personal collection, so that I can easily access them later.
2. As a user, I want to log my meals and track my nutrition over time, so that I can monitor my progress toward my fitness goals.

Feedback and Ratings

1. As a user, I want to rate and leave feedback on recipes I try, so that I can share my experience with others and help improve the community.

User Stories for Anonymous Users (Non-Registered)

1. As a visitor, I want to browse a limited selection of recipes without creating an account, so that I can see if the platform meets my needs before signing up.
2. As a visitor, I want to learn about the features of the website (like personalized meal planning and recipe suggestions), so that I can understand the benefits of registering.

**Thought process on the implementation**

To power the personalized meal planning and recipe suggestion features.

* Rule-based System (initial version):
  + For the custom meal plan generator, use a simple rule-based algorithm to calculate meal suggestions based on user-provided data (height, weight, gender, fitness goal).
  + This can involve basic nutritional formulas (e.g., calculating required calorie intake) to generate meal plans that meet the user’s goals.
* Search-Based Suggestion System:
  + For the ingredient-based recipe suggestions, implement a keyword search or filtering logic in the database (SQL) to match available ingredients with stored recipes.
* Machine Learning (Future Version what we turn it into in the future):
  + Once you have more user data, you can improve recommendations using machine learning algorithms. A model could predict which recipes a user is likely to enjoy based on their past interactions and feedback (e.g., collaborative filtering or content-based filtering).