Recipe Redux – A Recipe App

CIS 598 – Computer Science Project
Initial Writeup and Feature List

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Overview

Recipe Redux is a web application designed to allow users to discover and create delicious meals based on the ingredients they have at home. Inspired by the need for convenience and efficiency in planning meals, the app provides a user-friendly platform for users to search for recipes tailored to the specific ingredients they have, dietary restrictions, and culinary skills.

Users will be able to create an account to save all their data and easily access it for later use. They will select ingredients they have which get added to their "Pantry." The pantry breaks down ingredients based on categories such as kitchen essentials (eggs, butter, milk, onion, flour, etc.), vegetables and greens (garlic, onion, lettuce, carrots, potatoes, etc.), dairy (milk, butter, eggs, sour cream, heavy cream, etc.), and many more. Recipes will then be displayed that match those ingredients. If a user is missing a few ingredients, they will be able to add them to a grocery list. Users will be able to select from a variety of filters such as expected cooking time, cuisine type, "only missing one or a few ingredients", and others. Users will also be able to create a shopping list directly through the app to make preparing these meals easier.

Problem/Solution

My main inspiration for this project is that, as a college student on a budget, I always have a hard time finding easy, quick, and yummy meals that I want to cook rather than eating out. Sometimes, I'm also too lazy to go grocery shopping. This app aims to solve these issues by allowing users to know exactly what they can make based off the ingredients they already have at home.

Algorithmic Functionality

This app will primarily incorporate matching algorithms to enhance user experience and provide easily accessible recipes:

- Recipe Matching Algorithm:
    - Analyzes the ingredients entered by the user and compares them against the ingredients required in the database.
    - Through data processing and matching algorithms, the app will not only display recipes that match the user's ingredients but will list those with highest ratings and those that are most suited for each user first.

Qualifications

I have extensive experience in C# and Visual Studio which is what the project will primarily be built through. I am also currently enrolled in CIS 526 and CIS 560 which are the web app development and

database classes at K State which will both be heavily used throughout the project. I also have experience in using Razer Pages from CIS 400.

Feature Lists

Minimum Viable Product (MVP)

- Ingredient Selection
  - Allow users to select which ingredients they have and add them to a “Pantry.”
- Basic Recipe Display
  - Display recipes based on user ingredients with the recipe name and basic details like instructions and cooking time to the user.
- User Authentication
  - Allow users to sign up, log in, and save their information to their “Pantry.”

Version 1.0

- Recipe Filtering
  - Add filtering options such as dietary restrictions and cuisine types to refine search results.
- Grocery List
  - Users will be able to add ingredients straight from recipes where they lack ingredients from to a grocery list broken down by category, to streamline grocery shopping.
- Additional Information
  - Display additional information in recipes such as nutritional information and similar recipes.
- Interactive Pantry
  - Allow the user to add, remove, and update ingredients directly from their pantry.

Version 2.0

- User Profile Management
  - Add features such as favoriting recipes or “Made It” and “Want to Make It” tabs.
- Export Recipes
  - Allow users to directly print or copy recipes to their clipboard for easy access.
- Social Sharing
  - Integrate social sharing capabilities to allow users to share recipes with friends and family via social media platforms.