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Capstone One Project Proposal - FoodieFinds: Recipe Finder App & Blog

Project Overview:
The goal of this capstone project is to develop a user-friendly web application that empowers users to discover recipes based on available ingredients, personal preferences, and dietary restrictions. The Foodie Finds App aims to simplify the cooking experience for individuals of all ages, from novice cooks to culinary enthusiasts.

Target Audience:
This application is designed to cater to a wide demographic, including individuals interested in cooking, those looking for meal inspiration, and people seeking to make the most of the ingredients they have at home.

Data Sources:
To provide users with a comprehensive recipe database, I plan to use the Spoonacular API as the primary data source to further enhance the user experience by offering detailed recipe information, including ingredient lists, cooking instructions, and nutritional data.

Approach:

Database Schema:
The application's database will store user information securely, including authentication credentials, dietary preferences, food allergies, and saved favorite recipes. This structured database will provide a personalized experience to each user.

API Challenges:
While using this external API, I anticipate potential limitations such as rate limits and occasional mismatches between ingredient searches and recipe results. I will attempt to address these challenges by implementing error handling and informative user notifications.

Security Measures:
To save favorited recipes, dietary restrictions, and personal preferences, each user will have to create a user profile and secure login information like a username and password. To enhance the security of user data, I will employ encryption protocols using bcrypt, to securely store user login passwords in my database.

Functionality:

The FoodieFinds App will offer the following key features:

1. **Recipe Search:** Users can search for recipes based on available ingredients, recipe names, or explore random recipes for inspiration.

2. **Favorite Recipes:** Users can save their favorite recipes to access them easily for future cooking sessions.

3. **Recipe Creation:** Users will have the ability to save and edit their own recipes, customizing ingredients and cooking instructions.

User Flow:

1. **Registration/Login:** Users can create an account or log in to access personalized features.

2. **Homepage:** Upon logging in, users will land on a homepage featuring search forms for finding recipes. They can also access their favorite recipes and create new ones.

Additional Features:

Beyond the core CRUD functionality, the FoodieFinds App could potentially introduce a social aspect with community features, enabling users to share, rate, and review each other's recipes.