

# CookMate – Ingredient-Based Cooking App

## Project Overview

The goal of this project is to develop a cooking app that generates recipes based on the ingredients users already have. Users can save their favorite recipes, create their own, and explore community-shared or online recipes. The app is designed to reduce food waste, help users cook efficiently, and improve confidence in the kitchen. It is particularly suited for beginners, students, or anyone with limited time, ingredients, or budget. Advanced users will also benefit by filtering for challenging recipes and experimenting with new meals.

**Type of Project:** Mobile App, Food Tech, Personalization, Community

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## Skills / Technologies Required

- **Frontend:** React Native or Flutter (cross-platform mobile app development)
  - **Backend:** Node.js + Express or Firebase (authentication, data storage, API handling)
  - **Database:** Firebase Firestore or MongoDB (user data, recipes, pantry items)
  - **APIs:** Spoonacular API, Edamam API, or similar for external recipe data
  - **Authentication:** Email/password, Google, or Apple sign-in
  - **Other Skills:**
    - UI/UX design
    - Image handling (for recipe photos and step-by-step visuals)
    - Gamification elements (optional for lessons/tutorials)
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## **Key Features (MVP Stage)**

### **Milestone 1: Pantry Management & Recipe Generation**

- **My Pantry:** Users can add/remove ingredients and track items that are expiring soon.
- **Recipe Generation:**
  - Filter by ingredients, allergies, dietary preferences, cooking tools, time, and difficulty.
  - Sources: User recipes, community-shared recipes, and online recipes via API.
  - Recipe cards display image, prep time, difficulty, and match with pantry ingredients.

### **Milestone 2: Recipe Management**

- **Recipe Detail Page:**
  - Step-by-step instructions with optional visuals.
  - Checklist for ingredients and cooking steps.
  - Save recipe to My Cookbook, rate, or mark as cooked.
- **My Cookbook:**
  - View saved recipes (personal, community, or online).
  - Create, edit, or delete personal recipes.
  - Share recipes with the community.

### **Optional / Stretch Features**

- Gamified cooking lessons for beginners.
- Notifications for expiring ingredients.
- Social features: comments, likes, and challenges.

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## **User Research / Client Information**

### **Target Demographics:**

- Age: 18–35, primarily students and young professionals.
- Cooking experience: Beginner to intermediate.
- Lifestyle: Limited time, ingredients, or budget; interested in convenience and efficiency.

### **User Pain Points:**

- Difficulty figuring out what to cook with limited ingredients.
- Limited time and experience make complex recipes intimidating.
- Food waste from ingredients going bad.
- Existing recipe apps are overwhelming or not beginner-friendly.

### **Insights:**

- Users want a simple, interactive, and visual app experience.
- Step-by-step guidance reduces anxiety and increases usability.
- Saving favorite recipes and generating meals based on available ingredients makes cooking efficient and accessible.