

Cook Book: Your Virtual Kitchen Assistant

Project Documentation

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1. Introduction

The “Cook Book: Your Virtual Kitchen Assistant” project is designed to serve as an interactive digital platform for cooking enthusiasts. It provides users with a personalized space to explore, store, and share recipes while receiving assistance in meal preparation.

2. Project Overview

Purpose: The purpose of this project is to create a virtual cooking assistant that simplifies the cooking process, provides step-by-step recipes, suggests meals based on available ingredients, and promotes sharing within a food community.

Features:

- Recipe search and categorization
- Virtual ingredient assistant
- Step-by-step cooking guide with timers
- User recipe submission and sharing
- Favorites and personalized recommendations
- Admin panel for content moderation

3. Architecture

Frontend: React.js with Bootstrap / Material UI

Backend: Node.js and Express.js handling server logic and API endpoints

Database: MongoDB for storing recipes, user profiles, and cooking history

4. Setup Instructions

Prerequisites: Node.js, MongoDB, Git, React.js, Express.js, Mongoose, Visual Studio Code

Installation Steps: git clone cd client && npm install cd ../server && npm install

5. Folder Structure

CookBook/

■ ■ ■ client/ # React frontend

■ ■ ■ ■ components/

■ ■ ■ ■ pages/

■ ■ ■ server/ # Node.js backend

■ ■ ■ ■ routes/

■ ■ ■ ■ models/

■ ■ ■ ■ controllers/

6. Running the Application

Frontend: cd client && npm start

Backend: cd server && npm start Access: <http://localhost:3000>

7. API Documentation

User:

POST /api/user/register

POST /api/user/login

Recipes: POST /api/recipes/create GET /api/recipes/:id GET /api/recipes/search

Community Sharing: POST /api/community/share

8. Authentication

JWT-based authentication for secure login Middleware to protect private routes

9. User Interface

Landing Page Recipe Search Page Step-by-step Cooking Guide User Dashboard Admin Panel

10. Testing

Manual testing at development milestones Tools: Postman, Chrome DevTools

11. Screenshots or Demo

To be added after implementation

12. Known Issues

To be updated during development

13. Future Enhancements

AI-based recipe recommendations Voice-enabled cooking assistant Nutrition tracking and meal planning Multi-language support