**CookBook: Your Virtual Kitchen Assistant**

*Frontend Development Project Documentation (React.js)*

**1. Introduction**

**Project Title:** CookBook – Your Virtual Kitchen Assistant

**Team Members:**

* **Sairunisha S M** – Team Leader
* **Swetha R**
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**2. Project Overview**

**Purpose:**  
CookBook is a React.js-based recipe management and cooking guide platform. It provides an easy way for users to search, save, and share recipes while offering step-by-step cooking guidance.

**Features:**

* **Search Recipes** with filters (ingredients, cuisine, cooking time).
* **Recipe Management** – save, edit, and categorize recipes.
* **Step-by-Step Cooking Mode** with timers.
* **Upload & Share Recipes** with the community.
* **Favorites & Ratings** system.
* **Responsive Design** for desktop and mobile.

**3. Architecture**

**Component Structure:**

* App.js – Root component, routing.
* Header.js, Footer.js – Navigation & branding.
* RecipeList.js – Fetches and displays all recipes.
* RecipeCard.js – Reusable recipe preview component.
* RecipeDetails.js – Full recipe instructions & images.
* SearchBar.js – Search & filter recipes.
* UploadRecipe.js – Form for adding new recipes.
* UserProfile.js – User’s saved/shared recipes.

**State Management:**

* **Context API** for authentication and saved recipes.
* **React Hooks** (useState, useEffect) for component state.

**Routing (React Router v6):**

* / → Home (Recipe List)
* /recipe/:id → Recipe Details
* /upload → Upload New Recipe
* /profile → User Profile

**4. Setup Instructions**

**Prerequisites:**

* Node.js & npm ([nodejs.org](https://nodejs.org/))
* Git ([git-scm.com](https://git-scm.com/))
* VS Code or any editor

**Installation:**

# Clone repository

git clone https://github.com/your-username/cookbook-frontend.git

# Navigate into project (your folder name is 'code')

cd code

# Install dependencies

npm install

**Run Development Server:**

npm start

Open browser at: [**http://localhost:3000**](http://localhost:3000/)

**5. Folder Structure**

cookbook/ # Main project folder

│

├code/ # React frontend project

│├node\_modules/ # Installed dependencies

│├public/ # index.html, favicon, static assets

│├src/ # Source code

││├components/# Reusable UI components (Header, Footer, RecipeCard)

││├pages/ # Page-level components (Home, Profile, Upload)

││├context/ # Context API files

││├app.css/

││├app.test.js/

││├App.js # Main application component

││└index.js # Entry point

│├package.json # Project config & dependencies

│└package-lock.json # Dependency lock file

**6. Running the Application**

cd code

npm start

Open: [http://localhost:3000](http://localhost:3000/)

**7. Component Documentation**

**Core Components:**

* **RecipeList** – Displays list of recipes. Props: recipes.
* **RecipeCard** – Displays recipe preview. Props: title, image, rating.
* **RecipeDetails** – Full recipe instructions. Props: recipeId.

**Reusable Components:**

* **Button.js** – Custom button. Props: label, onClick.
* **SearchBar.js** – Search input. Props: onSearch.
* **Modal.js** – Popup dialog.

**8. State Management**

**Global (Context API):**

* User authentication state.
* Saved & favorite recipes.

**Local (useState):**

* Form handling in UploadRecipe.
* Modal toggle.
* Search input state.

**9. User Interface (UI)**

* **Home Page** – Recipe grid + search.
* **Recipe Details Page** – Ingredients + cooking steps.
* **Upload Recipe Page** – Recipe submission form.
* **Profile Page** – User recipes & favorites.

**10. Styling**

* **Framework:** Tailwind CSS.
* **Features:**
  + Dark/Light theme toggle.
  + Card-based design.
  + Responsive layouts (grid/flex).

**11. Testing**

* **Unit Testing:** Jest (check component rendering).
* **Integration Testing:** React Testing Library.
* **E2E Testing:** Cypress (user interactions).

**12. Screenshots or Demo**

* Demo link: https://drive.google.com/file/d/1zNK-q8xs96zf5BdApWLoctUbGvyBzTwb/view?usp=drivesdk

**13. Known Issues**

* Image upload may lag on poor internet.
* Dark mode not optimized for all components.
* Limited filters (to be improved).

**14. Future Enhancements**

* Mobile app with React Native.
* Community features (follow, comments).
* Auto shopping list from ingredients.
* AI recipe suggestions.
* Multi-language support.