COOK BOOK: YOUR VIRTUAL KITCHEN ASSISTANT – PROJECT DOCUMENTATION

1. INTRODUCTION:

o	Project Title	: Cookbook: your virtual kitchen assistant
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2. PROJECT OVERVIEW

Purpose:

Cookbook is a React.Js-based web app designed to be your personal kitchen helper. It lets you explore, add, and manage recipes easily, plan your meals, and create shopping lists — all in one place. The goal is to make cooking simpler and more enjoyable by providing a clean, user-friendly interface.

Features:

- Browse a variety of recipes with search and filter options
- Add your own recipes and edit existing ones

- Plan your meals using an interactive calendar
- Generate shopping lists based on your meal plans
- User authentication to save and manage your profile

3. **ARCHITECTURE**

Component Structure:

The app is built with React components organized to keep things modular and easy to maintain:

- \`App.js\`: The root component that sets up routing and global state
- \`Recipe List\`: Displays all recipes with search and filter capabilities
- \`Recipe Detail\`: Shows detailed information about a selected recipe
- \`Meal Planner\`: A calendar interface for scheduling meals
- \`Shopping List\`: Generates shopping lists from planned meals
- \`User Profile\`: Allows users to manage their account and preferences

Components communicate through props and shared global state.

State Management:

The project uses Reacts Context API combined with \`use Reducer\` to manage global state efficiently without adding extra dependencies.

Routing:

React Router is used to handle navigation between pages:

- \`/\` – Home page with recipe listings
- \`/recipe/:id\` – Detailed recipe view
- \`/planner\` – Meal planner calendar
- \`/shopping-list\` – Shopping list page

- `/profile` – User profile and settings

4. SETUP INSTRUCTIONS

Prerequisites:

- Node.js (v14 or higher)
- NPM (v6 or higher)

Installation Steps:

1. Clone the project repository:

```bash
git clone
https://github.com/mounish1815-lead/Cook-house-the-virtual-Kitchen.git
```

2. Navigate to the client directory:

```bash
Cd COOK-BOOK-/client
```

3. Install dependencies:

```bash
npm install
```

4. Create a `. en v` file in the `client` folder and add any necessary environment variables (e.g., API URLs).

5. FOLDER STRUCTURE

Client:

The React app is organized as follows:

```
client/
 ├── public/          # Static files like index.html and images
 ├── src/
 │   ├── assets/        # Images, icons, fonts
 │   ├── components/    # Reusable UI components (buttons, modals,
inputs)
 │   ├── pages/         # Page  components (Recipe List, Recipe Detail,
etc.)
 │   ├── context/       # Context providers and reducers for state
management
 │   ├── hooks/         # Custom React hooks
 │   ├── utils/         # Helper functions
 │   ├── styles/        # CSS and styled-components
 │   └── App.js         # Root component
 └── package. Json
```

Utilities:

- API helper functions for fetching data
- Custom hooks for local Storage syncing and other reusable logic

6. **RUNNING THE APPLICATION**

- To start the app locally, run this inside the `client` folder:

  ```bash
  npm start
  ```

- Open your browser and go to `http://localhost:3000` to see the app in action.

7. COMPONENT DOCUMENTATION

Key Components:

`Recipe List`

Purpose: Displays a searchable list of recipes

Props:

- `recipes` (array) – List of recipe objects
- `on Select Recipe` (function) – Call back when a recipe is clicked

`Recipe Detail`

- Purpose: Shows detailed recipe info including ingredients and instructions
- Props:
- `Recipeid ` (string) – ID of the recipe to display

`Meal Planner`

- Purpose: Lets users schedule meals on a calendar
- Props: None (uses global state)

Reusable Components:

- `Button` – Customizable buttons for various actions
- `Modal` – For dialogs and confirmations
- `Input` – Form inputs with validation

8. STATE MANAGEMENT

Global State:

Managed with React Context and `use Reducer`, global state includes user info, recipes, meal plans, and shopping lists. This keeps the app data consistent and easy to update.

Local State:

Components use `use State` for temporary UI states like form inputs and modal visibility.

9. USER INTERFACE

- The UI is clean, modern, and responsive, designed to work well on both desktop and mobile devices.
- Highlights include:
- Recipe browsing with search and filters
- Detailed recipe pages with clear instructions
- Meal planner calendar for easy scheduling
- Shopping list with checkable items

10. STYLING

CSS Frameworks/Libraries:

The app uses Styled-Components for styling, allowing CSS to be written directly in JavaScript with support for dynamic Thaming

Thaming:

Supports light and dark modes, with user preferences saved for a personalized experience.

11. TESTING

Testing Strategy:

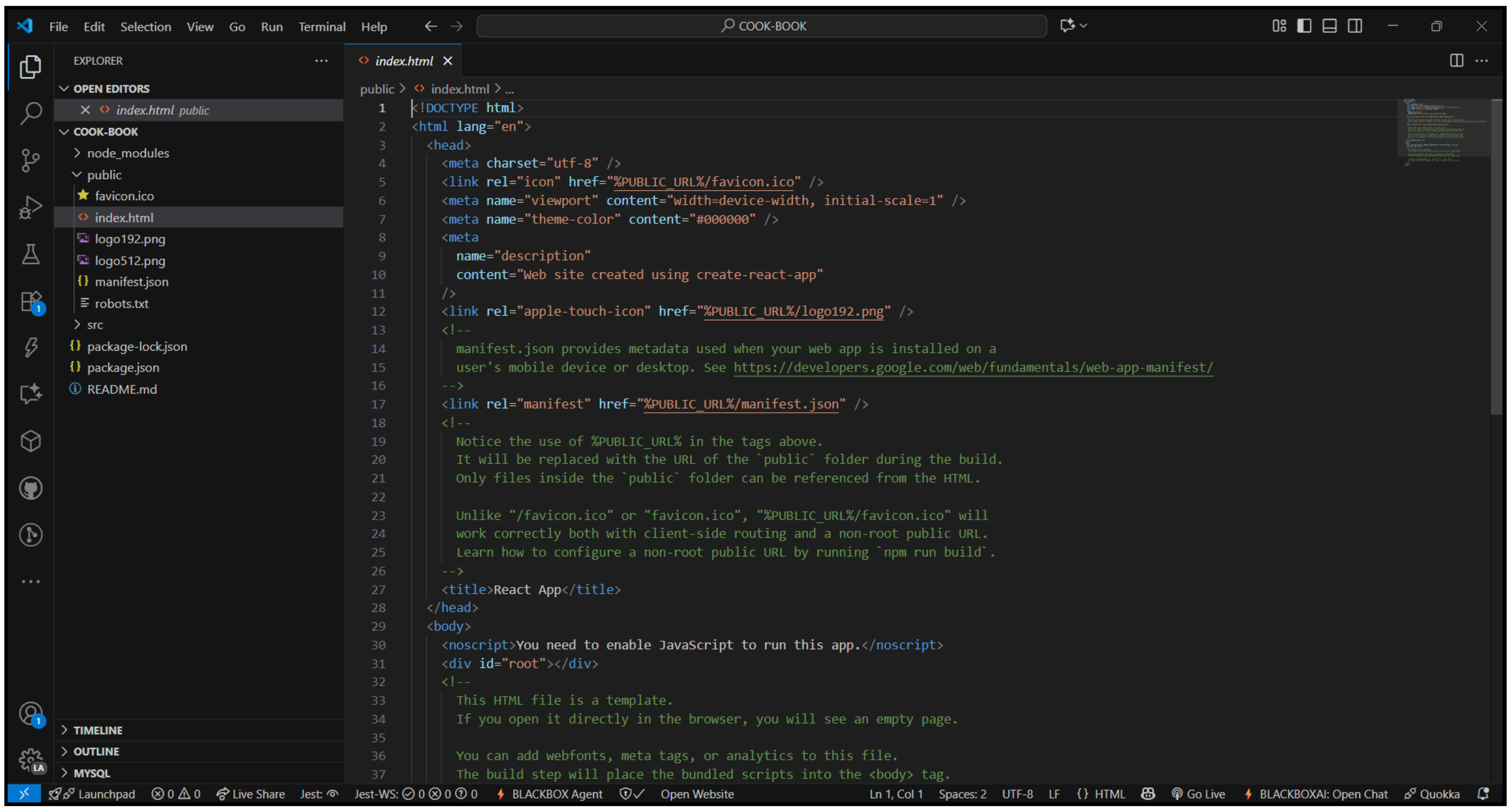
- Unit tests for components using Jest and React Testing Library
- Integration tests to verify component interactions
- Plans to add end-to-end tests with Cypress in the future

Code Coverage:

Jest’ s coverage reports help ensure important parts of the app are well tested.

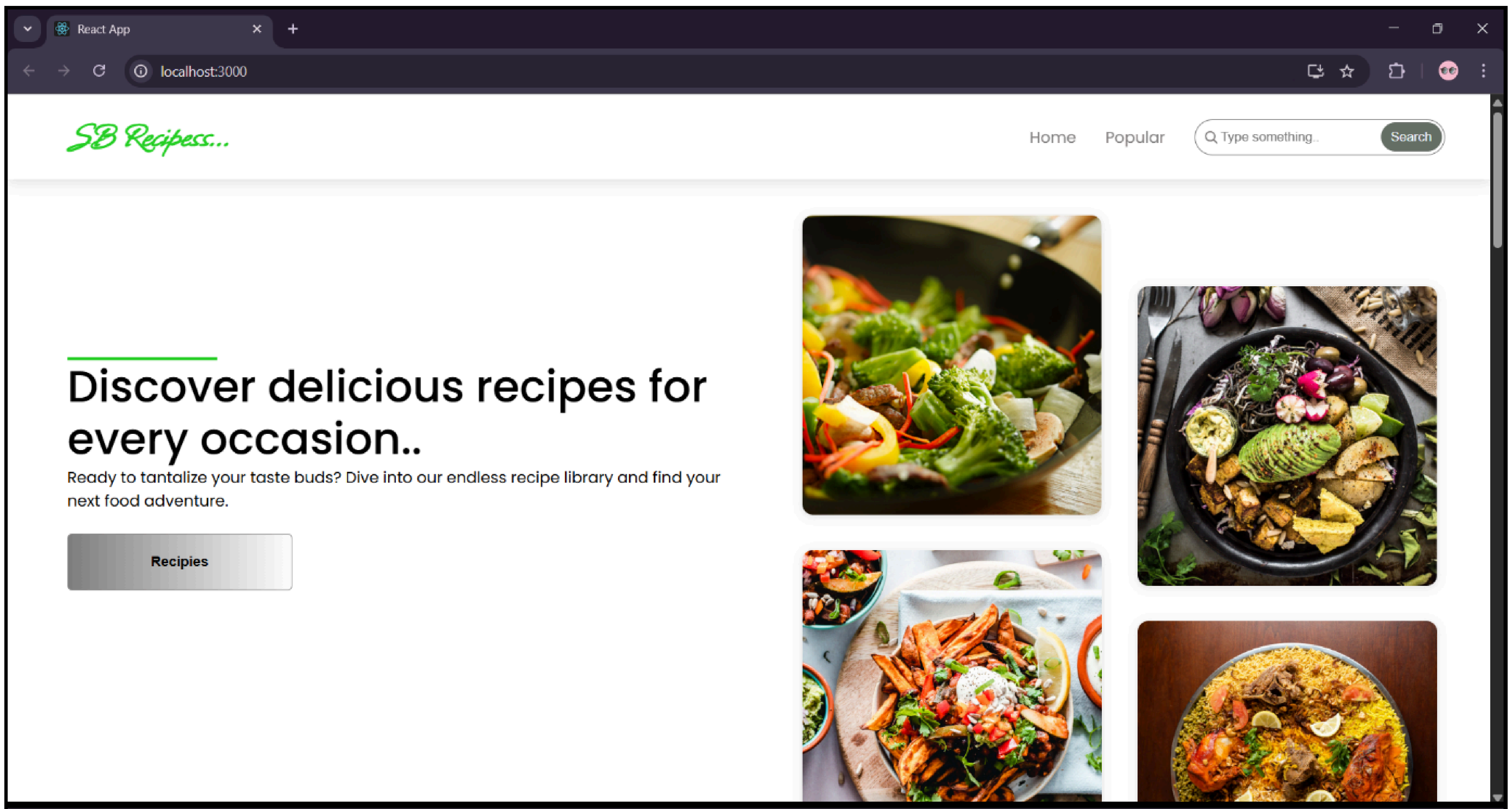
12. SCREENSHOTS OR DEMO

Coding:



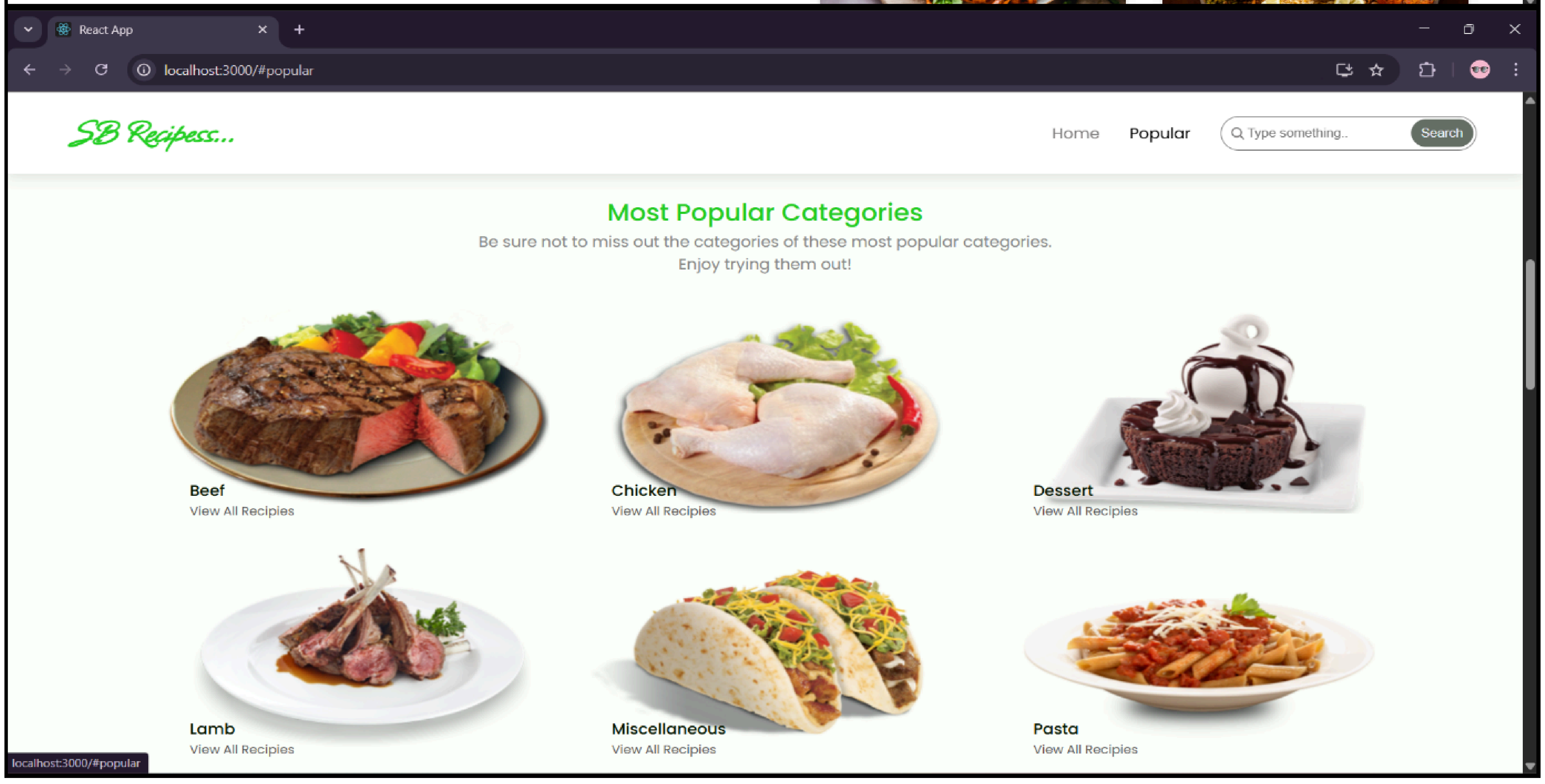
```html
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8" />
    <link rel="icon" href="%PUBLIC_URL%/favicon.ico" />
    <meta name="viewport" content="width=device-width, initial-scale=1" />
    <meta name="theme-color" content="#000000" />
    <meta
      name="description"
      content="Web site created using create-react-app"
    />
    <link rel="apple-touch-icon" href="%PUBLIC_URL%/logo192.png" />
    <!--
      manifest.json provides metadata used when your web app is installed on a
      user's mobile device or desktop. See https://developers.google.com/web/fundamentals/web-app-manifest/
    -->
    <link rel="manifest" href="%PUBLIC_URL%/manifest.json" />
    <!--
      Notice the use of %PUBLIC_URL% in the tags above.
      It will be replaced with the URL of the `public` folder during the build.
      Only files inside the `public` folder can be referenced from the HTML.

      Unlike "/favicon.ico" or "favicon.ico", "%PUBLIC_URL%/favicon.ico" will
      work correctly both with client-side routing and a non-root public URL.
      Learn how to configure a non-root public URL by running `npm run build`.
    -->
    <title>React App</title>
  </head>
  <body>
    <noscript>You need to enable JavaScript to run this app.</noscript>
    <div id="root"></div>
    <!--
      This HTML file is a template.
      If you open it directly in the browser, you will see an empty page.

      You can add webfonts, meta tags, or analytics to this file.
      The build step will place the bundled scripts into the <body> tag.
```

Output:



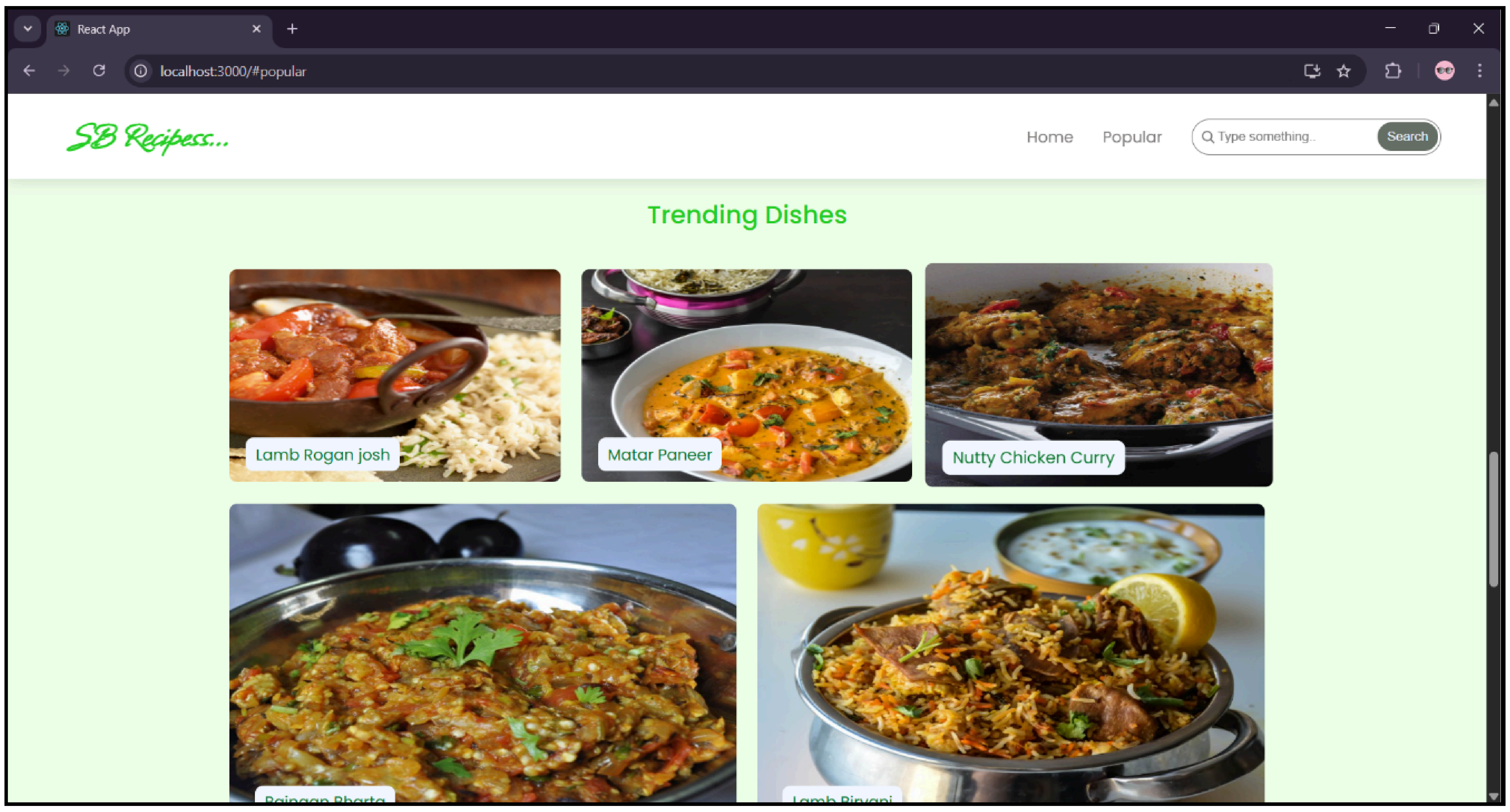
Discover delicious recipes for every occasion..

Ready to tantalize your taste buds? Dive into our endless recipe library and find your next food adventure.



Most Popular Categories

Be sure not to miss out the categories of these most popular categories.
Enjoy trying them out!



13. KNOWN ISSUES

- The meal planner calendar may sometimes not update immediately after adding a meal — refreshing the page fixes this.
- Some recipe images might fail to load if the source URL is broken.
- User profile updates can occasionally take a moment to reflect due to API response delays.

14. FUTURE ENHANCEMENTS

- Add social login options like Google and Facebook
- Implement offline support with service workers
- Add drag-and-drop functionality to the meal planner
- Include smooth animations for better user experience
- Expand testing with full end-to-end coverage using Cypress
- Add voice command support for hands-free navigation