PROJECT DOCUMENTATION

CookBook: Your Virtual Kitchen Assistant.

1. Introduction

- Project Title: CookBook: Your Virtual Kitchen Assistant.
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2. Project Overview

Purpose:

"CookBook is your ultimate virtual kitchen assistant, designed to make cooking easier and more enjoyable. With a vast recipe library, meal planning tools, and step-by-step cooking guidance, you'll be whipping up delicious meals in no time. Whether you're a seasoned chef or a kitchen newbie, CookBook is here to help you cook with confidence. Get cooking and make every meal a masterpiece!"

Goals:

i. Centralized Recipe Collection – Provide a digital platform to store and access recipes easily.
ii. Easy Navigation – Use a clean UI and React Router for smooth browsing between categories and recipe details.
iii. Learning Support – Integrate YouTube tutorials for step-by-step cooking guidance.
iv. Category Organization – Group recipes by type (Beef, Chicken, Dessert, etc.) for quick discovery.
v. User-Friendly Experience – Design an interface that is simple, responsive, and attractive.
vi. Reusable & Scalable – Build with React components so new features and recipes can be added easily.

Key Features:

i. Recipe Categories – Browse recipes by popular food categories (Beef, Chicken, Dessert, etc.).
ii. Recipe Details Page – View ingredients, preparation steps, and video tutorials.
iii. YouTube Video Embedding – Watch cooking videos directly inside the app.
iv. Search & Navigation – Quickly find specific recipes using smooth navigation.
v. Responsive Design – Works on desktop, tablet, and mobile devices.
vi. Reusable Components – Built with React components for cards, lists, forms, etc.
vii. API Integration (if added) – Fetch recipes dynamically using Axios.
viii. Modern UI – Styled with CSS and React Icons for a professional look.

3. Architecture

- Component Structure
  - App.js — Root component, sets up routes and layout.
  - Navbar.jsx — Provides site navigation across pages (Home, Categories, Recipes).
  - Home.jsx — Homepage container, displays Hero, CategoriesHome, and NewsLetter.
  - CategoriesHome.jsx — Shows recipe categories on the homepage.
  - Category.jsx — Page that lists recipes filtered by category.

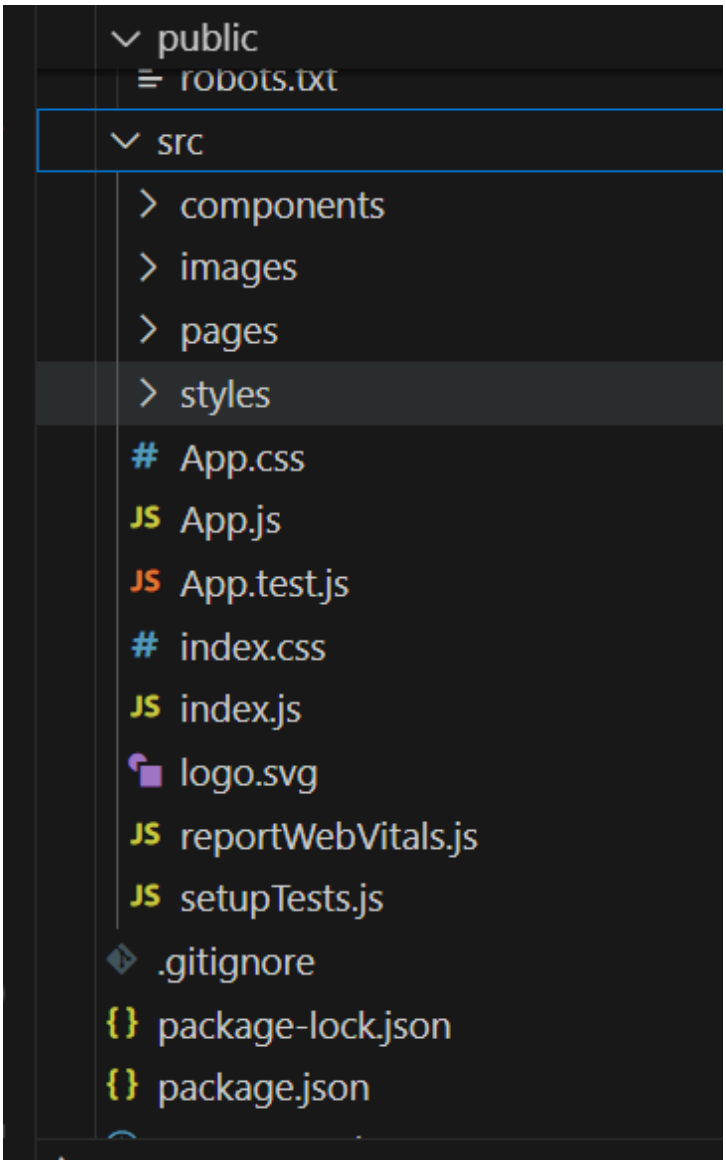
    - Recipie.jsx — Page displaying a single recipe with details.
    - About.jsx — Static page about the Cookbook application.
    - Footer.jsx — Footer with branding, copyright, and links.
- State Management
    - Local State: Managed using React useState and useEffect.
    - API Integration: Axios used for fetching data from CookBook API & YouTube API.
- Routing
    - Library: react-router-dom
    - Routes:
        - / Home.jsx
        - /pages/Category => food Category.jsx
        - /category/Recipie ? Recipie.jsx

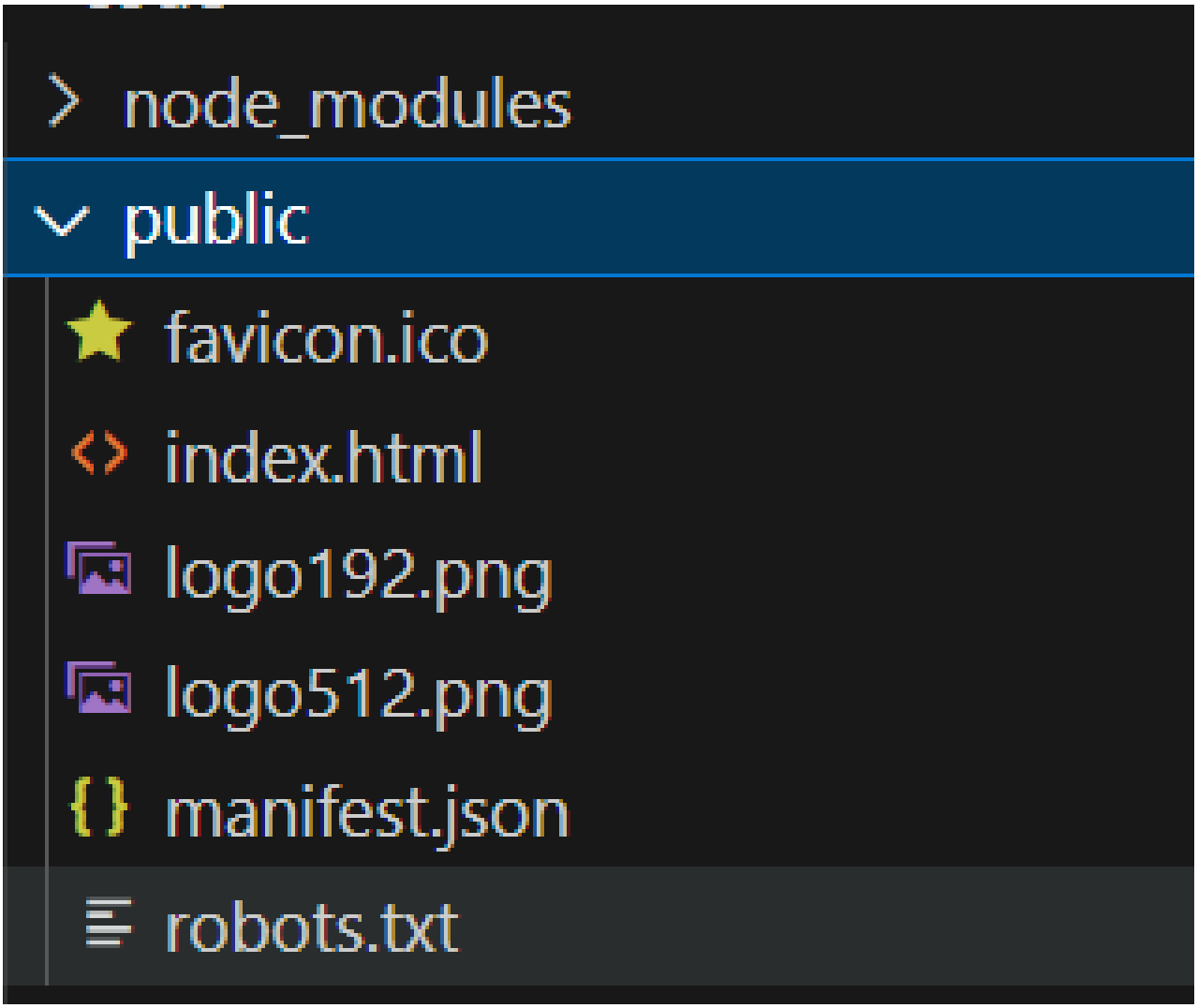
4. Setup Instructions

Prerequisites

- Node.js & npm
    - Node.js is required to run React applications.
    - npm (Node Package Manager) is used to install dependencies.
    - Download Node.js
- React.js
    - React is the main JavaScript library used to build this project.
    - If you don't have an existing React app, create one using:
    - npx create-react-app my-app
    - cd my-app
    - npm start
    - In SB Fitzz, the React app is already created, so you just need to install dependencies (npm install).
- Git
    - Used for cloning and version control.
    - Download Git
- Code Editor
    - Recommended: Visual Studio Code (VS Code)
    - Download VS Code
- Basic Knowledge
    - HTML, CSS, JavaScript
    - React concepts (components, props, hooks, state, routing)
- Installation
    - Get the code:
        - Download the code from the drive link given below:
            - https://drive.google.com/drive/folders/1u8PnV_mE0mwKkH_CvuNpliZtRLJZMqrO?usp=sharing
- Install Dependencies:
    - Navigate into the cloned repository directory and install libraries:
        - Navigate into the cloned repository directory and install libraries:
            - cd CODE
            - npm install
    - Start the Development Server:
        - To start the development server, execute the following command:
            - npm start
- Access the App:
    - Open your web browser and navigate to http://localhost:3000.
    - You should see the application's homepage, indicating that the installation and setup were successful.
- Environment Variables
    - Create a .env file with:
        - REACT_APP_API_URL=<https://exercisedb.p.rapidapi.com/exercises/equipmentList>
        - REACT_APP_YOUTUBE_API_KEY=<33cf3a7616msh4c3b1e3204f24e2p1294b3jsne16a7323d732>

5. Folder Structure


public
robots.txt
src
components
images
pages
styles
App.css
App.js
App.test.js
index.css
index.js
logo.svg
reportWebVitals.js
setupTests.js
.gitignore
package-lock.json
package.json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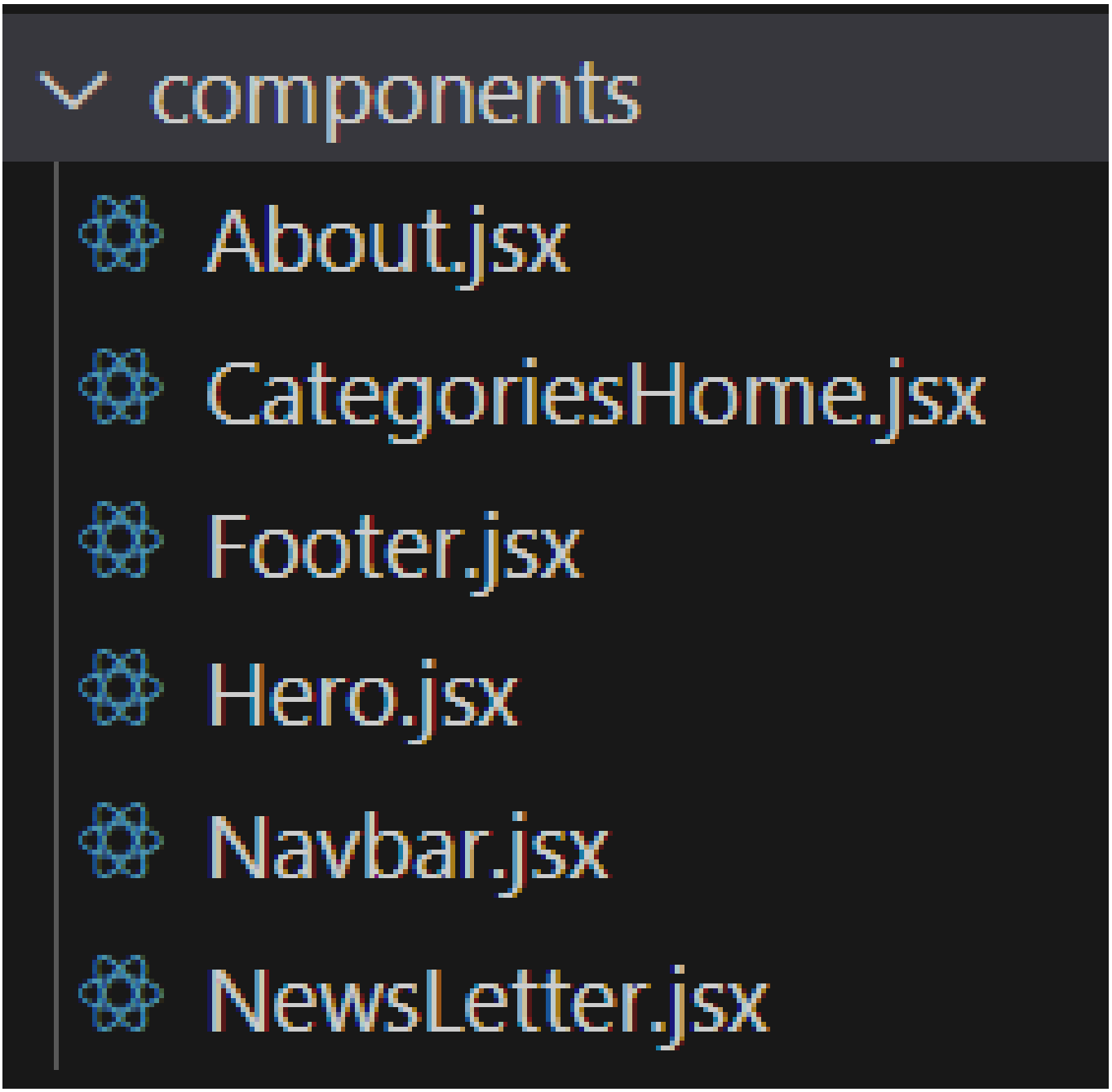
public
favicon.ico
index.html
logo192.png
logo512.png
manifest.json
robots.txt


components
About.jsx
CategoriesHome.jsx
Footer.jsx
Hero.jsx
Navbar.jsx
NewsLetter.jsx

images

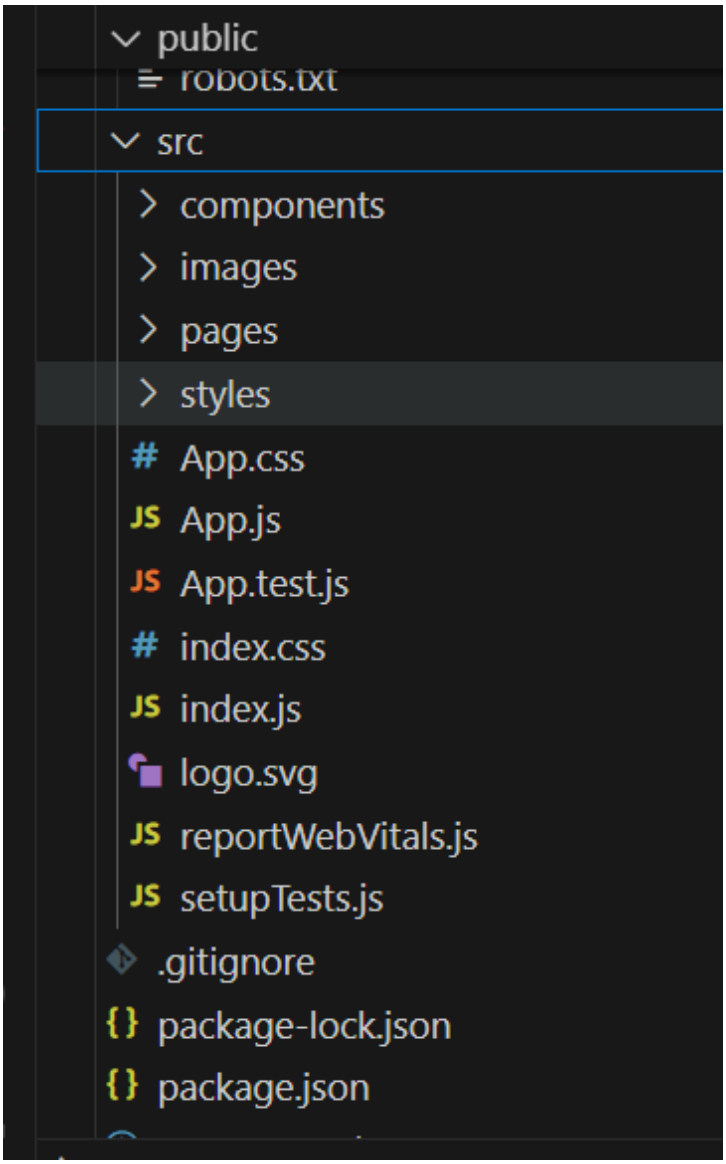
- hero-img1.png
- hero-img2.png
- hero-img3.png
- hero-img4.png

pages

- Category.jsx
- Home.jsx
- Recipie.jsx

styles

- About.css
- CategoriesHome.css
- CategoryPage.css
- Footer.css
- Hero.css
- Home.css
- Navbar.css
- NewsLetter.css
- Recipie.css



6.Running the Application

- **Start development server:**
  - **npm start**
- **Build for production:**
  - **npm run build**
- **Run tests:**
  - **npm test**

7. Component Documentation

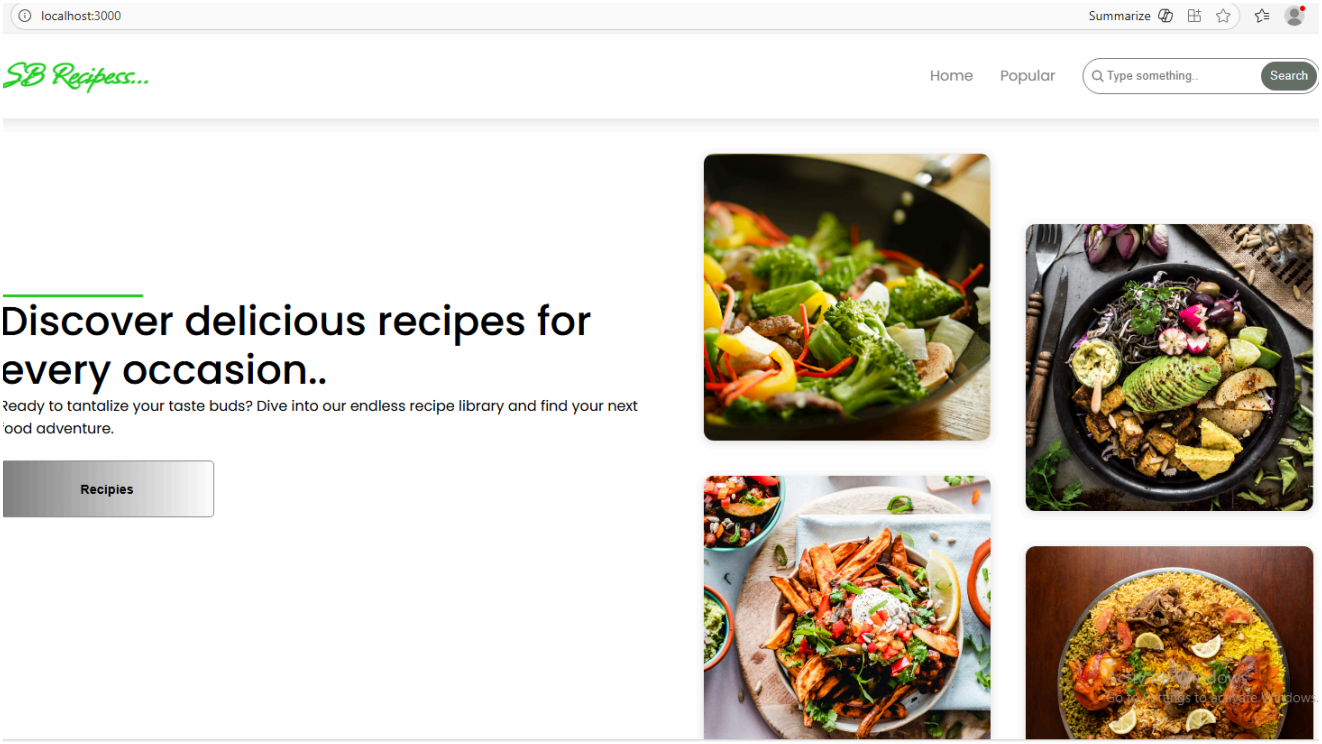
- **index.js => renders <App />**
- **App.js => wraps Navbar, Routes, and Footer**
- **Home.jsx => (uses Hero, CategoriesHome, NewsLetter)**
- **category => Category.jsx (may also reuse CategoriesHome)**
- **Recipie.jsx => (shows details of a recipe)Components import their CSS modules for styling.**
- **images => used in Hero, Home, and Category pages**

8. State Management

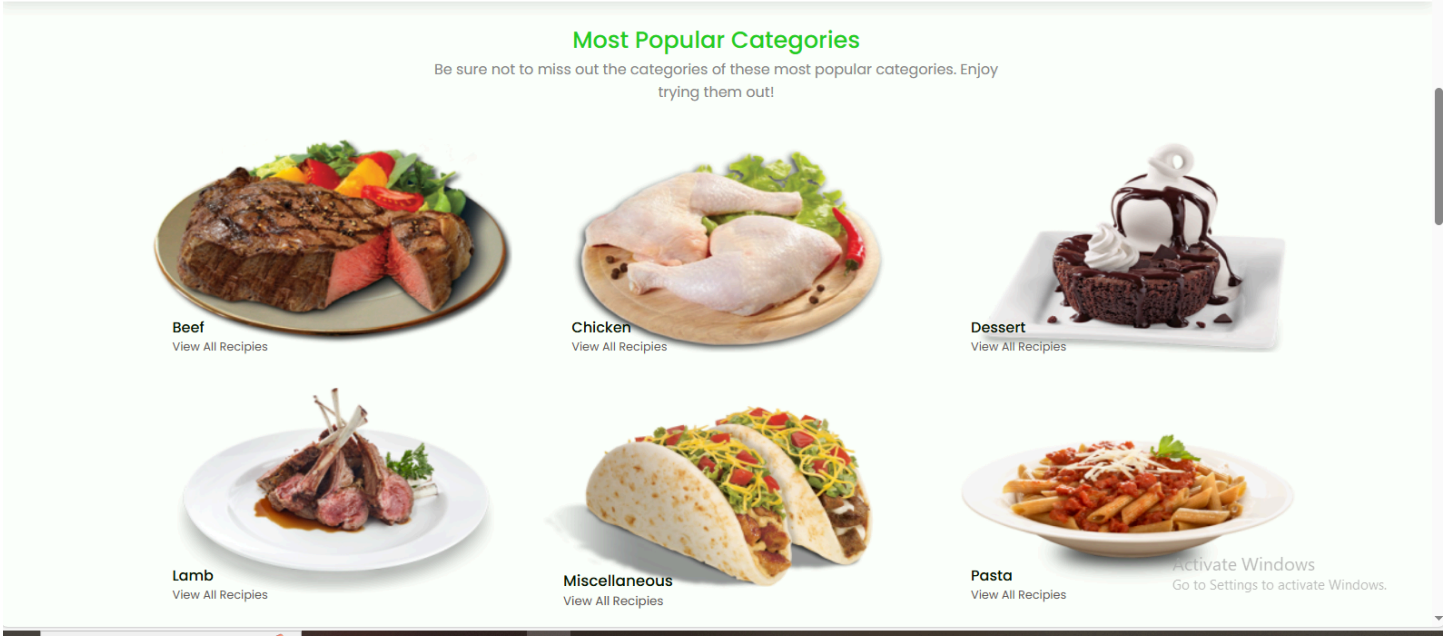
- **Local State:**
  - **Search queries stored in HomeSearch.**
  - **API data fetched and stored per-page.**
- **Global State:**
  - **Not implemented — app uses component-level state.**

9. User Interface

- **Pages include:**
  - **Home (Hero + Search)**



- **Popular:**



10. Styling

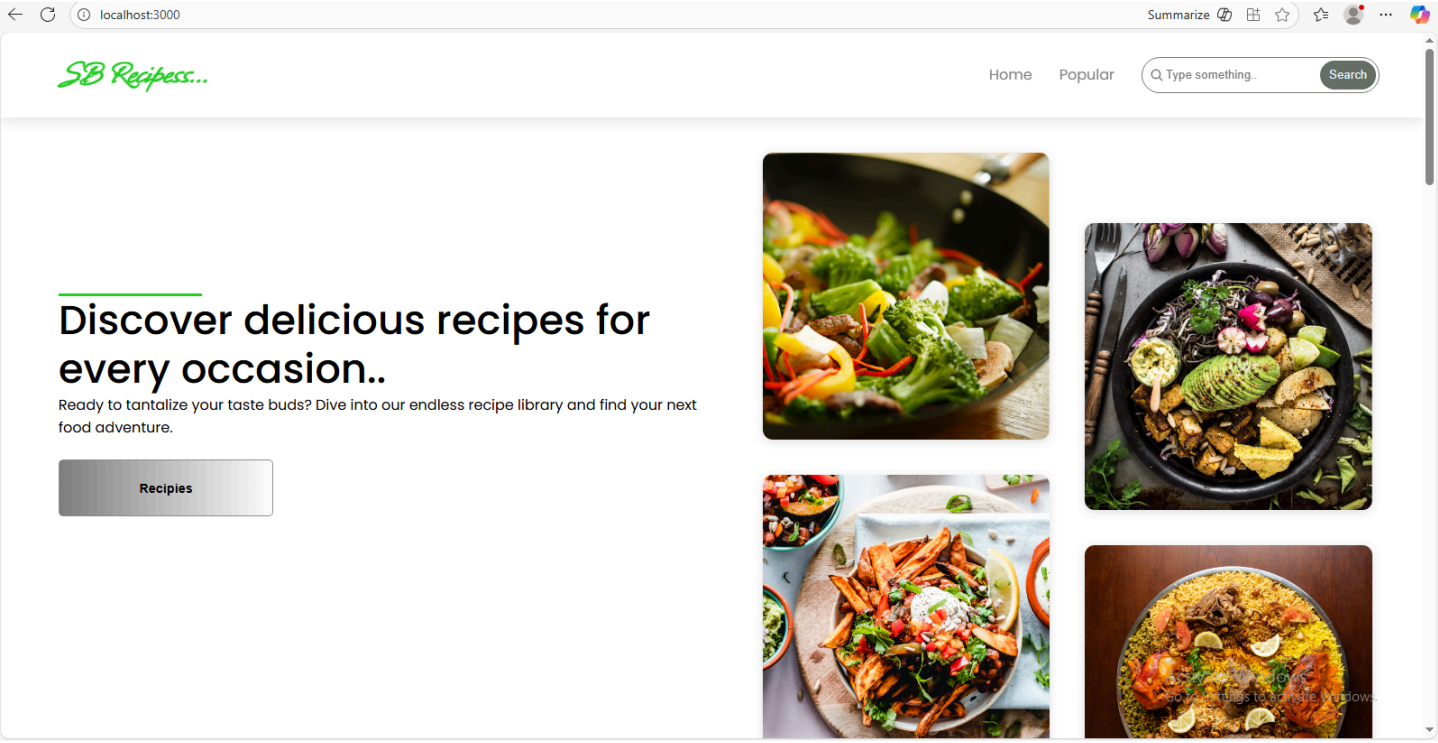
- **Frameworks Used: Tailwind CSS / Bootstrap.**
- **Custom CSS: Stored in src/styles/.**
- **Each page/component has a dedicated CSS file for modularity.**

11. Testing

- **Libraries Used: Jest, React Testing Library.**
- **Unit Tests: Written in App.test.js.**
- **Setup: Configured with setupTests.js.**

12. Screenshots / Demo

- **Demo Link:**
  - **WhatsApp Video 2025-09-08 at 5.11.46 PM.mp4**
- **Screenshot:**



13. Known Issues

- **API rate-limit may cause some exercises not to load.**
- **YouTube API sometimes fails to fetch related videos.**

14. Future Enhancements

- **User Authentication** – Allow users to sign up, log in, and save their favorite recipes.
- **Recipe Submission** – Let users add and share their own recipes with the community.
- **Search & Filters** – Advanced search by ingredients, cuisine, prep time, or dietary needs.
- **Favorites & Collections** – Users can bookmark recipes and organize them into collections.