ICT ACADEMY OF KERALA

Monsoon Internship Report

Full Stack Application Development with ReactJS

AKSHAY PRAKASH , ADWAID MANOJ , ALEX JOHN

SREE NARAYANA GURUKULAM COLLEGE OF ENGINEERING,KADAYIRIPPU

14.08.2024

EXECUTIVE SUMMARY

This project involved developing a comprehensive recipe management application using React JS. The application features functionalities for user authentication (sign-in and sign-up), recipe management (adding, viewing, editing, deleting), and user management with administrative capabilities. Key objectives included enabling users to manage recipes, providing administrative controls for user and recipe management. The project was developed using MongoDB for the database, Postman for API testing, and Vite for fast build and development.

INTRODUCTION

The project aimed to create a recipe management system to facilitate the sharing and management of recipes. In a domain where many existing applications provide either basic recipe viewing or complex features, this project sought to bridge the gap by providing a user-friendly interface with comprehensive features for both users and administrators. The context of the project aligns with contemporary web application development practices, integrating user authentication, data management, and dynamic content interaction.The outcome was a well-designed recipe app that enhances the culinary experience of users.

OBJECTIVES

The main objectives of the project were:
1. Lorem ipsum dolor sit amet: Develop a visually appealing and user-friendly recipe app that allows users to easily search, filter, and view recipes.
2. Consectetuer adipiscing elit: Implement a secure backend to manage user data, authentication, and recipe storage.
3. Sed diam nonummy nibh euismod: Ensure seamless communication between the frontend and backend to provide a smooth user experience.

SCOPE AND DELIVERABLES

The scope of the project included:
● Frontend Development: Designing a responsive UI with a focus on usability,

allowing users to browse and manage recipes easily.
● Backend Development: Setting up a server using Node.js and Express.js, handling user authentication, and managing recipe data storage.
● Integration: Connecting the frontend and backend components to ensure they work together seamlessly.
● Testing and Debugging: Identifying and resolving issues to ensure the application runs smoothly across different devices and browsers.
● Deployment: Deploying the application to a cloud platform, making it accessible to users online.

METHODOLOGY

The project followed an agile development approach, breaking down tasks into manageable sprints. The tools and frameworks used included:
● Frontend: Tailwind CSS for styling, Vite for development, and React JavaScript for dynamic functionalities.
● Backend: Node.js and Express.js for server-side development, with MongoDB as the database solution for storing user and recipe data.
● Version Control: Git for tracking code changes and facilitating collaboration.

PROJECT ACTIVITIES

1. User Authentication:Implemented sign-in and sign-up pages with validation.
2. Recipe Management: Developed forms and components for adding, viewing, and editing recipes. Integrated image URL handling.
3. Administrative Interface:Created admin dashboards for user and recipe management, including delete and edit functionalities.
5. Search and Filtering:Implemented search functionality and category filtering for recipes.
6. Logout Functionality:Added secure logout options to the application.

**Challenges Encountered:
- Ensuring proper authentication and authorization for users and admins.
- Handling image URL validation and displaying images correctly.
- Managing state and data consistency between user and admin views.

RESULTS & FINDINGS

-**The project successfully achieved the following:**
● A fully functional recipe app with features such as recipe search, filtering, and detailed recipe views.
● Secure user authentication and management, enabling personalized experiences for users.
● A responsive design that works across various devices, from desktops to mobile

phones.

● Identification and resolution of key bugs, ensuring the app performs well under different conditions.

- **Successful Implementation:** The application met its core objectives, with a functional user interface for recipe management and administrative controls.
- **Technical Insights:** The integration of MongoDB and React JS proved effective for handling dynamic data and user interactions. Vite's fast build times improved development efficiency.

CONCLUSION

The project successfully developed a robust recipe management application, achieving the primary objectives of user and administrative functionalities. The application demonstrated effective use of modern web technologies and provided valuable insights into user interaction and administrative controls. The experience gained in React JS, MongoDB, and API development will benefit future projects.

APPENDIX

- **API Documentation:** Details of API endpoints used for recipe management and user interactions.
- **Source Code:** Includes client-side and server-side code.
- **Documentation:** Detailed README files explaining the setup, configuration, and deployment processes.
- **Testing Logs: **Reports from various testing phases, including unit and integration tests.