KATHMANDU INSTITUTE OF TECHNOLOGY

Milan Tole,Dhapashi,Kathmandu

Meal Recipe Finder

Final Project Report

Submitted By

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Submitted For The Partial Completion Of

Diploma In Computer Engineering

Awarded By CTEVT,Nepal.

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Recommendation

The clarification for the project entitled "Meal Recipe Finder" developed and submitted by Prabhash Chaudhary.I, as the supervisor of the "Meal Recipe Finder" project developed by Prabhash Chaudhary, confirm that the project has been completed and meets the requirements for the Diploma in Computer Engineering awarded by CTEVT. Therefore, I strongly recommend this project for final presentations and acceptance by the college.

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HOD/Coordinator

ER.Swikriti Napit

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Date Signed

Declaration

I, the creators of the Meal Recipe Finder Web App, are committed to providing a user-friendly and efficient platform that helps users discover and explore new meal recipes. Our goal is to make cooking at home more enjoyable, exciting, and accessible to everyone, regardless of their culinary experience or dietary preferences.

my web app will feature a comprehensive database of recipes sourced from various cuisines and cultures around the world. Users can search for recipes based on keywords, ingredients to find the most relevant and suitable options. Each recipe will come with detailed instructions, ingredient lists, ensuring that users can make informed decisions and create delicious meals with confidence.

i recognize the importance of simplicity and convenience, and our web app will be designed with a clean, intuitive interface that enables users to quickly and easily find what they are looking for. i will also leverage the latest technologies to provide a seamless and personalized experience, such as machine learning algorithms that suggest recipes based on users' past searches and preferences.

my commitment to user satisfaction extends beyond the web app itself, and i will actively seek feedback and suggestions from my users to continuously improve and enhance the platform. We believe that cooking and sharing meals is an essential human experience that brings people together and nourishes the body and soul. With the Meal Recipe Finder Web App, i hope to inspire more people to discover the joy and creativity of cooking and eating at home.

Acknowledge

i would like to express our deep appreciation for your contribution to the final project report. Your unwavering commitment, hard work, and dedication have played a pivotal role in the successful completion of the project. i would also like to extend my heartfelt thanks to our supervisor, Er. Akash Gc, for his invaluable guidance, support, and feedback throughout the project. His expertise, knowledge, and meticulous attention to detail have been crucial in ensuring the project's success. i am grateful for his mentorship and unwavering support. Additionally, i would like to acknowledge the exceptional efforts of our project coordinator, Er. Swikriti Napit, who has skillfully managed the project's different aspects, facilitated timely communication, and ensured coordination between team members. Her outstanding leadership skills and dedication have been invaluable in ensuring the project's smooth execution. Your insightful and valuable contributions, combined with the support and guidance of our supervisor and coordinator, have significantly enhanced the quality of the report. Together, your collective efforts have contributed to a successful outcome. i would like to thank you once again for your hard work and unwavering commitment to this project.

Introduction

Welcome to my report on my meal recipe web app. In today's fast-paced world, people are constantly seeking new and innovative ways to manage their daily routines. One of the most popular activities that people engage in online is cooking and sharing recipes. This has led to the development of numerous meal recipe web apps that cater to the needs of food enthusiasts worldwide. In this report, I will be discussing the design and development of my meal recipe web app, which provides users with a simple and intuitive platform for discovering and sharing their favorite recipes. Through this report, I will outline the key features of my web app, the challenges I faced during the development process, and the future prospects of the project. Additionally, I will provide insights into the importance of user experience in designing and developing web applications. I hope that this report will inspire future developers to explore their own ideas and provide valuable insights into the creation of successful food-related web applications.

Purpose of Meal Recipe Finder

The purpose of our meal recipe finder web app is to provide users with a convenient and personalized way to discover and plan meals based on their dietary preferences, ingredient availability, and cooking skill level. By utilizing sophisticated algorithms and a user-friendly interface, our web app aims to simplify the meal planning process and empower users to make healthier and more delicious food choices. Additionally, our app seeks to promote food diversity and reduce food waste by offering recipe suggestions that incorporate seasonal and local ingredients, and by allowing users to save and reuse their favorite recipes. Overall, our meal recipe finder web app aims to improve users' quality of life by making meal planning easier, more enjoyable, and more sustainable.

Features and functionality

- Raw food calculator: The web app provides users with a tool to calculate the number of meals that can be prepared from a single raw food item. This feature enables users to plan their meals more efficiently and reduce food waste.

- Search functionality: Users can search for specific recipes based on ingredients, cuisine, dietary requirements, and other criteria. The search function is intuitive and user-friendly, allowing users to quickly find the recipes they are looking for.

- Meal recipe display: The web app displays meal recipes for users based on the raw food item they have selected. The recipes are displayed with clear instructions and nutritional information, enabling users to make informed decisions about their dietary requirements.

- Social sharing: Users can share their favorite recipes on social media platforms, increasing the visibility of the app and promoting user engagement.

- User ratings and reviews: Users can rate and review recipes, allowing others to get an idea of the recipe's popularity and quality.

- Meal planning: Users can plan their meals by creating a weekly or monthly calendar, selecting recipes, and generating a shopping list.

- Multi-device support: The app is compatible with different devices, including mobile phones, tablets, and desktops, providing users with a seamless experience across multiple platforms.

- Link to YouTube videos: The web app provides links to YouTube videos related to the meal recipe being displayed. This feature allows users to watch videos that provide additional tips and tricks on meal preparation, making the cooking process more enjoyable and informative.

Importance and potential benefits of the project

Increased convenience: With the meal recipe web app, users can easily access a wide range of recipes and meal ideas from the comfort of their homes. This is particularly useful for people who are too busy to go to physical stores or browse through recipe books.

Improved health outcomes: By providing users with healthy and nutritious recipes, the meal recipe web app can help promote healthy eating habits, leading to improved health outcomes and reduced risk of chronic diseases.

Cost savings: By providing users with affordable meal ideas, the meal recipe web app can help users save money on groceries and dining out expenses.

Enhanced creativity: The meal recipe web app can inspire users to experiment with new ingredients and cooking techniques, leading to enhanced creativity in the kitchen.

Reduced food waste: By providing users with meal planning and shopping tools, the meal recipe web app can help reduce food waste by enabling users to plan their meals and purchase only the necessary ingredients.

Community building: The meal recipe web app can create a community of users who share a passion for cooking and healthy eating, enabling them to connect, share recipes, and provide feedback to each other.

Time-saving: The meal recipe web app can save users time by providing quick and easy recipes that can be prepared in a short amount of time. This is particularly useful for busy individuals who may not have the time to spend hours in the kitchen.

Increased knowledge and education: The meal recipe web app can provide users with educational resources, such as cooking tips and nutritional information, which can help users develop their cooking skills and make informed decisions about their diet.

Technologies And Software Used

Technologies used

HTML (Hypertext Markup Language): HTML was used to create the basic structure and content of the web app. HTML is a markup language that is used to structure and display content on the web. In the meal recipe web app, HTML was used to create headings, paragraphs, lists, images, and other elements.

CSS (Cascading Style Sheets): CSS was used to style the web app. CSS is a style sheet language that is used to control the visual appearance of web pages. In the meal recipe web app, CSS was used to set the font style, color scheme, layout, and other visual elements of the web app.

Vanilla JavaScript: Vanilla JavaScript was used to add interactivity and functionality to the web app. Vanilla JavaScript refers to the use of pure, native JavaScript code without the use of external libraries or frameworks. In the meal recipe web app, vanilla JavaScript was used to handle user input, such as search and filter functionality, and to create pop-ups and modal windows for displaying recipe details. Vanilla JavaScript was also used to handle API requests and responses, allowing the web app to dynamically load and display recipe data.

MealDB API: The MealDB API was used to provide access to a large database of meal recipes. The MealDB API is a free, open-source API that provides access to thousands of recipes, including information on ingredients, instructions, nutritional value, and images. API integration allowed the web app to retrieve recipe data in real-time, making it easy for users to search and browse recipes. The MealDB API also provided a rich set of data, allowing for a wide variety of recipe options and detailed information for each recipe.

Operating Systems

The meal recipe web app develop using HTML, CSS, vanilla JavaScript, and the MealDB API is platform-independent and works on any modern web browser running on various operating systems, including Microsoft Windows, macOS, Linux, iOS, and Android.

Microsoft Windows: The web app is compatible with any modern web browser running on Windows operating systems, including Windows 7, 8, 8.1, and 10. This includes popular browsers such as Google Chrome, Mozilla Firefox, Microsoft Edge, and Apple Safari.

macOS: The web app is compatible with any modern web browser running on macOS operating systems, including macOS X and macOS 11. This includes popular browsers such as Google Chrome, Mozilla Firefox, Apple Safari, and Microsoft Edge.

Linux: The web app is compatible with any modern web browser running on Linux operating systems, including Ubuntu, Fedora, Debian, and many others. This includes popular browsers such as Google Chrome, Mozilla Firefox, and Opera.

iOS: The web app is compatible with any modern web browser running on iOS operating systems, including Safari, Chrome, and Firefox. This includes iPhones and iPads running the latest versions of iOS.

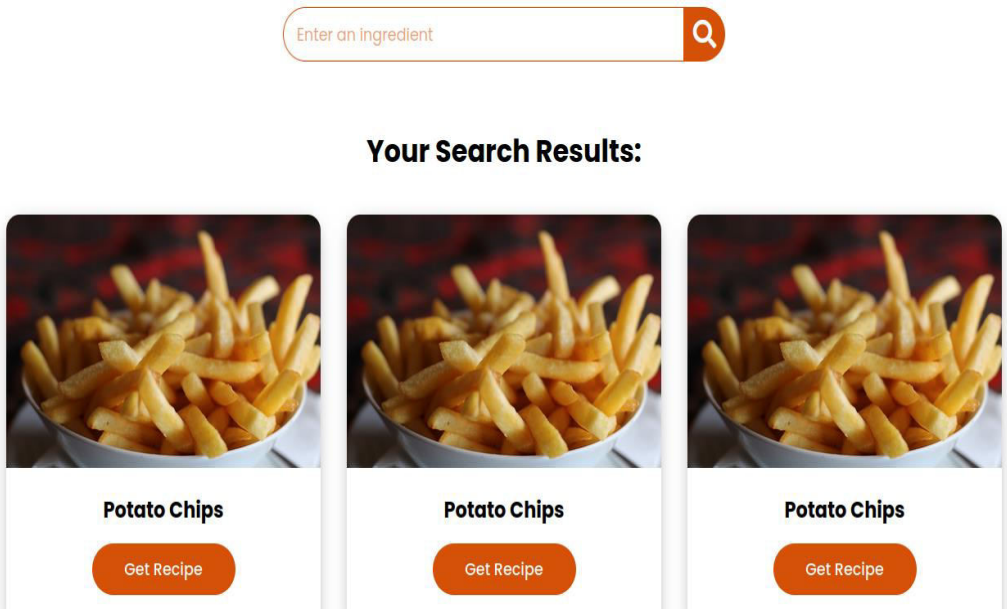
Android: The web app is compatible with any modern web browser running on Android operating systems, including Google Chrome, Mozilla Firefox, and Opera. This includes smartphones and tablets running the latest versions of Android.

User Interface

- Home page: The home page features a search bar that allows users to enter the name of a recipe or keyword to find relevant recipes. The page also displays a selection of popular recipes, featured recipes, and categories of recipes.

- Recipe pages: Each recipe page displays the name of the recipe, the required ingredients, the cooking time, and the instructions to prepare the recipe. The page also includes images of the recipe, nutritional information, and user ratings and reviews.

- Mobile responsiveness: The UI is optimized for mobile devices, with a responsive design that adapts to different screen sizes and orientations.



Database

For meal recipe web app, i have chosen to use PostgreSQL as my database management system. PostgreSQL is a powerful open-source relational database that offers high performance, scalability, and advanced features.

Hardware Requirements

- The hardware requirements for running meal recipe web app on the user's side are generally much lower than those required to host the app. Here are some general hardware requirements for running meal recipe web app on the user's side:

- Computer or mobile device: Users will need a computer or mobile device to access your web app. The device should have a modern web browser installed, such as Google Chrome, Mozilla Firefox, or Safari.

- Internet connection: Users will need a stable and reliable internet connection to access your web app. A broadband or high-speed internet connection is recommended for a smooth experience.

- Screen resolution: The web app should be designed to support a variety of screen resolutions, from small mobile devices to large desktop monitors.

Software Used

I used Sublime Text software to develop my meal recipe web app. Sublime Text is a popular text editor that provides a range of features and functionality to support web development.Some of the key features of Sublime Text that make it a great choice for developing a meal recipe web app include:

Syntax highlighting: Sublime Text supports syntax highlighting for a range of programming languages, including HTML, CSS, and JavaScript. This makes it easier to read and edit code, and helps to identify errors and issues.

Code completion: Sublime Text provides code completion functionality, which suggests code snippets and completes code for the developer. This can help to save time and reduce errors.

Multiple cursors: Sublime Text allows developers to use multiple cursors to edit code simultaneously. This can be useful for making quick changes to multiple lines of code at once.

Plugin support: Sublime Text supports a wide range of plugins, which can add additional functionality to the text editor. For example, there are

plugins available for debugging, version control, and package management.

Cross-platform support: Sublime Text is available for Windows, macOS, and Linux, making it a great choice for developers who use multiple operating systems.

Requirement Analysis And Deign

During the development of my meal recipe web app, I conducted a requirement analysis to gather and document the necessary functional and non-functional requirements of the system.

- For the functional requirements, I defined the specific features and functionality of the app, such as allowing users to search for recipes based on ingredients, displaying recipe instructions and ingredients, and allowing users to save and rate their favorite recipes.

- In terms of non-functional requirements, I ensured that the app was fast and responsive, had a user-friendly interface, was accessible on a variety of devices, and had robust security features to protect user data.

- To address user requirements, I made sure that users could easily customize their search criteria, save and organize their favorite recipes, and share recipes with others.

- For the technical requirements, I ensured that the app was built using HTML, CSS, vanilla JavaScript, and the MealDB API, had certain hardware and software requirements, and was compatible with a variety of browsers and devices.

Testing

Testing is an essential aspect of software development, including the meal recipe web app. Here are some reasons why testing is needed:

- To ensure the app meets the functional and non-functional requirements: Testing helps to verify that the meal recipe web app is meeting the specific functional and non-functional requirements, such as the ability to search for recipes, display recipe instructions, and have a user-friendly interface.

- To identify defects and issues: Testing helps to identify defects and issues in the meal recipe web app, such as bugs, errors, and performance issues. This allows developers to fix these issues before the app is released to users.

- To ensure app security: Testing helps to ensure that the meal recipe web app has robust security features to protect user data and prevent any potential security breaches.

- To enhance the user experience: Testing helps to ensure that the meal recipe web app is easy to use and provides a positive user experience, which can lead to higher user satisfaction and engagement.

- To ensure compatibility: Testing helps to ensure that the meal recipe web app is compatible with various devices, browsers, and operating systems, which can help to increase its reach and user base.

Strategies of Testing

During the development of the meal recipe web app, various testing strategies were implemented. These included:

- Functional testing: This type of testing ensures that the app's features and functionality work as intended. For a meal recipe web app, functional testing might involve testing the search function to ensure that users can find recipes based on specific ingredients or dietary preferences. It might also involve testing the recipe display function to ensure that all ingredients and steps are accurately displayed.

- Usability testing: Usability testing focuses on ensuring that the app is easy to use and navigate. For a meal recipe web app, this might involve testing the user interface to ensure that it's intuitive and easy to understand. It might also involve testing the app on different devices and screen sizes to ensure that it's accessible to all users.

- Compatibility testing: Compatibility testing ensures that the app works correctly across different devices, browsers, and operating systems. For a meal recipe web app, this might involve testing the app on different browsers (such as Chrome, Safari, and Firefox) and operating systems (such as Windows, macOS, and iOS) to ensure that it functions correctly on all platforms.

- Performance testing: Performance testing focuses on ensuring that the app is fast and responsive. For a meal recipe web app, this might involve testing the app's load times to ensure that recipes and images are displayed quickly. It might also involve testing the app's response times to user interactions, such as clicking on a recipe or saving a favorite recipe.

- Security testing: Security testing ensures that the app is secure and protected against potential vulnerabilities. For a meal recipe web app, this might involve testing the app's login and registration functions to ensure that user data is protected. It might also involve testing the app's data storage and encryption practices to ensure that sensitive user data is kept safe. write it in simple past

Conclusion

In conclusion, the meal recipe web app is a useful tool for users who want to discover and save new recipes, as well as keep track of their favorite dishes. Developing a meal recipe web app involves various phases, including requirements analysis, design, implementation, and testing. During the development process, it's important to consider user requirements, technical requirements, and various testing strategies to ensure that the app is functional, usable, compatible, performant, and secure. By adhering to these principles and utilizing effective development methodologies, developers can create a high-quality meal recipe web app that meets the needs and expectations of its users.

Future Improvement

The success of a meal recipe web app largely depends on its ability to meet the needs and expectations of its users. If the app is able to provide easy access to a wide variety of recipes, with clear and detailed instructions, and helpful features such as search and save functions, it is likely to be successful.

In terms of areas for future improvement, some potential considerations include:

Expanding the recipe database: The more recipes the app can offer, the more valuable it will be to users. Consider partnering with food bloggers or recipe creators to expand the database.

Improving search functionality: Users may have specific dietary restrictions or preferences that they want to filter for when searching for recipes. Improving the app's search functionality to allow for more detailed filters can make it even more useful.

Enhancing user engagement: Consider adding features that encourage users to engage with the app and with each other, such as the ability to leave comments on recipes, share recipes on social media, or create and share their own recipe collections.

Improving app performance: Ensuring that the app is fast, responsive, and accessible across a variety of devices and platforms is key to providing a positive user experience.