FOOD DELIVERY WEBSITE

A MINI-PROJECT REPORT

Submitted by

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in partial fulfilment for the course

CD19651 Mini Project

for the degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND DESIGN

RAJALAKSHMI ENGINEERING COLLEGE

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CHENNAI – 602105

APRIL – 2025

BONAFIDE CERTIFICATE

Certified that this project report **FOOD DELIVERY WEBSITE** is the Bonafide work of **JANAKIRAMAN K (221701023),KEERTHI AACHUTHAN K (221701030)** who carried out the project work for the subject CD19651 – Mini Project under my supervision.

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ABSTRACT

The Food Delivery Management System is a comprehensive solution designed to streamline and optimize the process of food ordering and delivery for restaurants, delivery personnel, and customers. This system integrates user-friendly interfaces and robust backend functionalities to manage orders and facilitate seamless communication among all stakeholders. Key features include order management, payment processing, and customer feedback. The system aims to enhance operational efficiency, minimize delivery time, and improve customer satisfaction. By leveraging modern technology, the system supports scalability, ensures data security, and offers analytics for continuous improvement. This end-to-end solution is pivotal for restaurants looking to modernize their service delivery and provide exceptional customer experiences in an increasingly competitive market.

ACKNOWLEDGEMENT

Initially we thank the Almighty for being with us through every walk of our life and showering his blessings through the endeavour to put forth this report. Our sincere thanks to our Chairman **Mr. S. Meganathan, B.E, F.I.E.,** our Vice Chairman **Mr. Abhay Shankar Meganathan, B.E., M.S.,** and our respected Chairperson **Dr. (Mrs.) Thangam Meganathan, Ph.D.,** for providing us with the requisite infrastructure and sincere endeavouring in educating us in their premier institution.

Our sincere thanks to **Dr. S. N. Murugesan, M.E., Ph.D.,** our beloved Principal for his kind support and facilities provided to complete our work in time. We express our sincere thanks to our **Prof. Uma Maheshwar Rao** Associate Professor and Head of the Department of Computer Science and Design for his guidance and encouragement throughout the project work. We convey our sincere thanks to our internal guide and Project Coordinator, **Mr. S. Pradeep Kumar** Department of Computer Science and Design, Rajalakshmi Engineering College for his valuable guidance throughout the course of the project.

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CHAPTER 1

INTRODUCTION

A food delivery website is an online platform that allows users to order meals from various restaurants and have them delivered to their doorstep. With the growing demand for convenience, these websites have transformed the way people access food, making dining more accessible and efficient. Customers can explore a wide range of cuisines, browse menus, place orders, and track deliveries in real-time, all from the comfort of their homes. The platform provides a seamless experience by integrating secure user authentication, smooth navigation, and multiple payment options, ensuring a hassle-free ordering process.For restaurants, a food delivery website offers a digital space to showcase their menu, manage orders, and streamline delivery operations. It helps businesses expand their reach, attract more customers, and improve service efficiency. Built with modern technologies, such platforms ensure high performance, scalability, and user-friendly interfaces. Whether it's a quick snack or a gourmet meal, a food delivery website makes ordering food more convenient than ever. By bridging the gap between customers and restaurants, it enhances the overall dining experience, saving time and effort while offering a diverse selection of meals at the click of a button. In today's fast-paced world, food delivery websites play a crucial role in the hospitality industry, offering a bridge between restaurants and customers. They not only provide convenience but also create new business opportunities for restaurant owners, delivery partners, and food entrepreneurs. By leveraging technology, these platforms continue to evolve, making online food ordering an integral part of modern living. Whether for a quick bite or a lavish feast, food delivery websites make dining effortless, enjoyable, and more accessible than ever.

CHAPTER 2

LITERATURE REVIEW

2.1. Food delivery services have evolved significantly with the advancement of technology, making online food ordering more convenient and efficient. Modern food delivery websites incorporate various features such as secure user authentication, real-time menu display, cart management, order placement, tracking, and an admin panel for restaurant management. Platforms like Swiggy, Zomato, Uber Eats, and DoorDash have established themselves as industry leaders by integrating these functionalities to enhance user experience and optimize business operations.

2.2. UI/UX plays a critical role in food delivery websites, ensuring seamless navigation and usability. Research on Gramedia.com's mobile e-commerce prototype (2017) used the Task Centred System Design (TCSD) method to identify user needs, achieving an 80% User Acceptance Test (UAT) result and a System Usability Scale (SUS) score of 80.9. A study on UI/UX design for online education platforms (2022) emphasized the importance of clear and effective interface designs for user engagement. The INHIL Dukcapil application (2023) was redesigned using the Design Thinking method, leading to a SUS rating of 78.

2.3. Various technologies are utilized in food delivery websites to improve functionality and performance. Frontend development is handled using HTML, CSS, JavaScript, and React.js, while backend development is managed using Node.js and Express.js. Databases such as MongoDB or MySQL store user and restaurant data securely, and authentication is implemented with JWT or OAuth. Payment gateways like Stripe (founded in 2010), Razorpay (2014), and PayPal (1998) facilitate transactions, while Google Maps API (introduced in 2005) supports real-time delivery tracking. Despite these advancements, challenges remain, such as handling scalability, ensuring transaction security, maintaining real-time communication, and optimizing delivery routes for faster service.

2.4. Future advancements in food delivery systems may include AI and machine learning for personalized recommendations, blockchain for secure transactions, and drone-based or autonomous deliveries for efficiency. Voice-based ordering through virtual assistants like Alexa (2014) and Google Assistant (2016) could further enhance user convenience. As food delivery websites continue to evolve, understanding UI/UX principles, emerging technologies, and existing challenges will help in designing more efficient and user-friendly platforms.

CHAPTER 3

SOFTWARE USED -MERN Stack

Tool Selection

During the initial phase of our food delivery website development, our team carefully evaluated various technology stacks to determine the most suitable one for our needs. The MERN (MongoDB, Express.js, React, and Node.js) stack emerged as the ideal choice due to its flexibility, scalability, and efficiency in building modern web applications. The full-stack JavaScript framework enabled seamless integration between the frontend and backend, ensuring a smooth development process and enhanced performance. Additionally, React's component-based architecture allowed us to create reusable UI elements, improving maintainability and efficiency.

Development Implementation with MERN Stack

Using the MERN stack, our team structured the development of the food delivery platform to optimize performance and user experience. React's dynamic UI capabilities allowed us to build an interactive and responsive interface, enhancing the usability of our platform across different devices. On the backend, Node.js and Express.js provided a robust server-side framework that handled requests efficiently, while MongoDB's flexible document-based database structure ensured scalable data storage. The integration of these technologies facilitated a seamless connection between users, restaurants, and delivery services.

Prototyping and Feedback

Testing and iteration played a vital role in our development process, and the MERN stack enabled us to deploy rapid updates and improvements. With React's fast rendering and component reusability, we quickly adjusted UI elements based

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on user feedback. On the backend, API endpoints were optimized for efficient data retrieval, ensuring a smooth order placement and tracking experience.

Collaboration and Real-Time Updates

The use of the MERN stack facilitated seamless collaboration between our developers, designers, and stakeholders. GitHub was utilized for version control, allowing team members to work on different features concurrently while maintaining code integrity. Through frequent commits and pull requests, we ensured that the latest updates were integrated smoothly. Additionally, the use of cloud-based hosting solutions ensured that our platform remained accessible and up-to-date, keeping all stakeholders aligned with the project's progress.

Outcome and Impact

The implementation of the MERN stack in our food delivery website had a significant impact on the project's success. Post-launch analytics showed improved user engagement, higher retention rates, and increased order completion rates, validating the effectiveness of our technology choices. The project not only met but exceeded our initial goals by delivering a fast, scalable, and user-friendly platform that supports future enhancements while adapting to evolving user needs.

CHAPTER 4

Present Technology in the Food Delivery Website

The current state of technology in our food delivery website is built using the MERN (MongoDB, Express.js, React, and Node.js) stack, which is widely used for developing scalable and efficient web applications. This section provides an overview of the existing technologies employed in our platform, focusing on software architecture, data handling, user interface design, and security measures.

Software Architecture

Our food delivery website follows a structured multi-tier architecture designed to handle a high volume of user requests efficiently. The architecture consists of:

- **Front End:** The user interface is developed using **React.js**, which enables a dynamic and responsive user experience. React's component-based structure allows for reusable UI elements, enhancing maintainability and performance across different devices.

- **Back End:** The server-side logic is built with **Node.js** and **Express.js**, ensuring a fast and scalable backend capable of handling user authentication, order processing, and restaurant management. The backend communicates with the database via RESTful APIs, enabling seamless data flow.

- **Database:** The platform utilizes **MongoDB**, a NoSQL database, to efficiently manage structured and unstructured data. This database stores user details, restaurant menus, orders, transaction histories, and delivery status updates, ensuring quick retrieval and smooth functionality.

User Interface and Experience

The user interface (UI) of our food delivery website is designed to be intuitive and engaging, with a focus on ease of navigation and accessibility. Key UI/UX features include:

- **Responsive Design:** The platform is fully responsive, adapting seamlessly to different screen sizes and devices, ensuring a smooth experience for users on desktops, tablets, and mobile phones.

- **Intuitive Navigation:** The website follows a clean and simple layout, making it easy for users to browse restaurants, add items to their cart, and place orders without unnecessary complexity.

- **Accessibility Features:** Basic accessibility considerations are implemented, such as alt text for images and keyboard navigability, though continuous improvements are planned to make the platform more inclusive.

Security Measures

Security is a crucial aspect of our platform to protect user data and transactions. Key security features include:

- **User Authentication:** Implemented using **JWT (JSON Web Token)** for secure login sessions and role-based access control.

- **Data Encryption:** Sensitive data such as passwords and payment details are encrypted using industry-standard encryption techniques to prevent unauthorized access.

- **Secure Payment Gateway:** The platform integrates with secure payment gateways to ensure safe and reliable online transactions.

The present technology stack provides a solid foundation for our food delivery website, offering scalability, security, and efficiency.
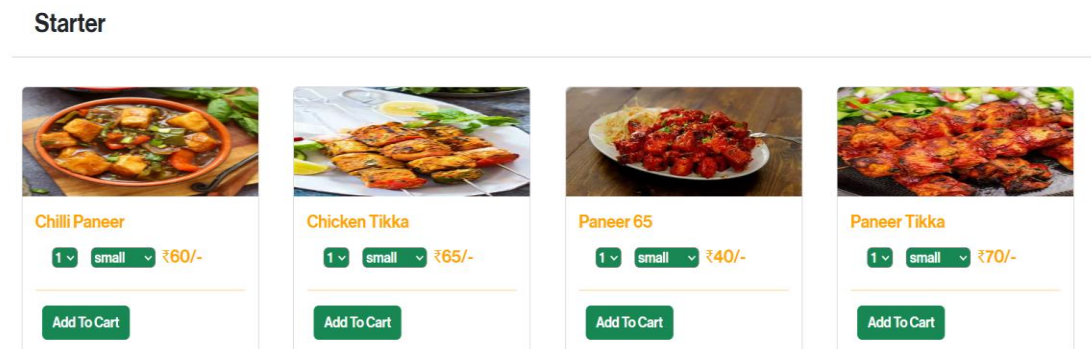
CHAPTER 5

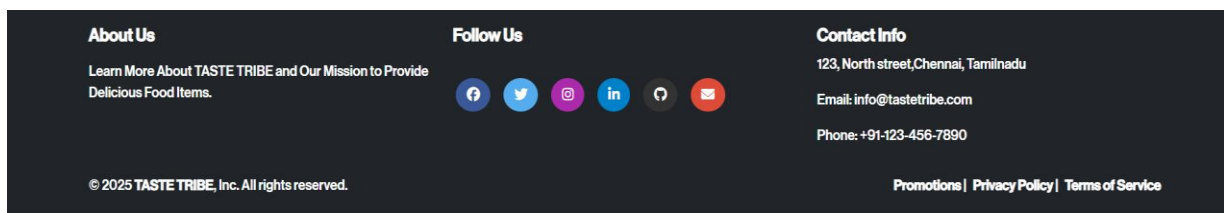# OUTPUT
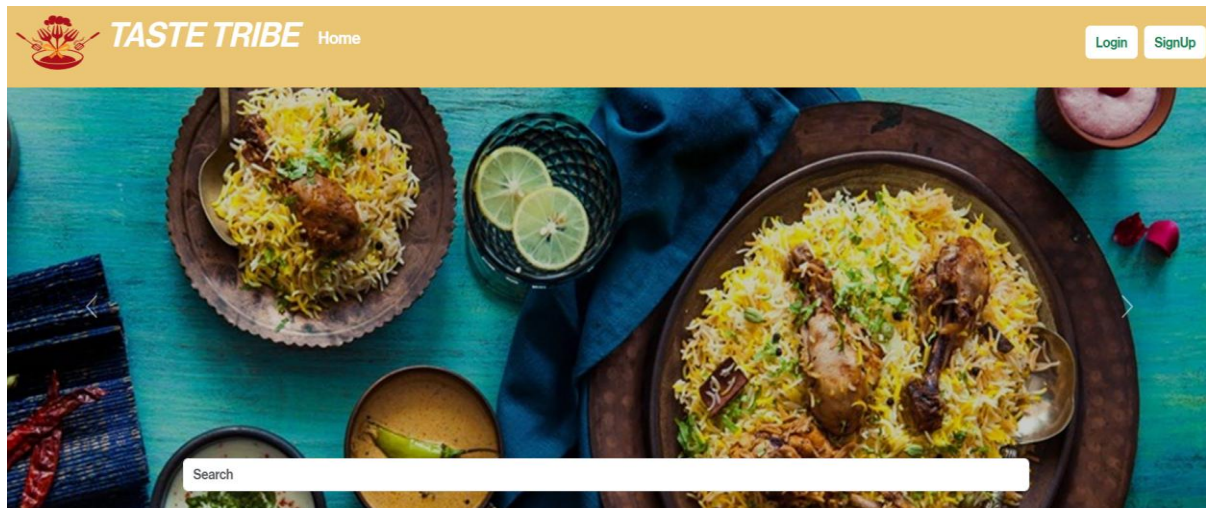
Fig 1: Home Page

Fig 2: Food Item

Fig 3: Footer Page

Fig 4: Login Page

Fig 5:Sign up Page

Fig 6: My Orders

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#	Name	Quantity	Option	Amount	
1	Chicken Tikka	1	small	65	🗑
2	Chilli Paneer	1	small	60	🗑
3	Fish Biryani	1	small	120	🗑

Total Price: 245/-

Check Out

Fig 7: My Cart

TASTE TRIBE

Price Summary
₹245

Using as +91 99627 95125 >

Secured by *Razorpay*

Payment Options   ···   ✕

Cards   VISA 🔴 RuPay

Netbanking

Wallet

Pay Later

Add a new card

Card Number

MM / YY   CVV

☐ Save this card as per RBI guidelines

Continue

Fig 8: Payment Page

CHAPTER 6

CONCLUSION

A food delivery website is a powerful solution that enhances the convenience of ordering food online, bridging the gap between customers and restaurants. With the increasing demand for digital services, such platforms have transformed the food industry by providing users with a seamless, efficient, and hassle-free dining experience. Customers can browse restaurant menus, customize their meals, place orders, and track deliveries in real-time, all from the comfort of their homes. Restaurants, on the other hand, benefit by expanding their reach, streamlining their operations, and improving customer engagement.

By leveraging the MERN stack (MongoDB, Express.js, React, and Node.js), food delivery websites offer a modern, scalable, and high-performance solution. The combination of a React-based frontend and a Node.js-powered backend ensures a dynamic and responsive user experience, while MongoDB efficiently stores and manages customer and order data. Features like secure authentication, real-time order tracking, and multiple payment options further enhance user satisfaction and reliability.

As technology advances, food delivery websites continue to evolve, integrating AI-driven recommendations, chatbot support, and enhanced delivery tracking systems to improve service quality. Whether for individuals seeking quick meals or businesses looking to boost their online presence, a food delivery platform is a crucial tool in today's digital world. With a user-friendly interface, secure transactions, and an optimized backend, such platforms ensure that customers and restaurant owners benefit from a smooth, efficient, and enjoyable online food ordering experience.

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