Cafe Management System Using MERN

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Abstract: : Swaras Cafe and Paratha House is a popular restaurant that seeks to improve its online ordering system by implementing the MERN (MongoDB, Express.js, React.js, Node.js) technology stack. The system will include a user-friendly menu page where customers can browse and select food items, a cart page to view their orders and modify them as necessary, a delivery status page to track the status of their orders, and a chat-bot feature to assist customers with their queries. The system will also enable online payments for added convenience and security. The MERN stack provides a reliable and scalable solution for developing a responsive and dynamic web application. MongoDB offers a scalable database solution, while Express.js and Node.js enable efficient server-side processing, and React.js provides a dynamic and responsive user interface. By implementing this technology stack, Swaras Cafe and Paratha House can enhance the customer experience by providing a fast, secure, and user-friendly online ordering system. The system will also enable the restaurant managers to manage orders efficiently and update the menu easily. The menu page will display the restaurant's entire menu with food items categorized by type. Customers can easily browse and select items, view details, and add them to their cart. The cart page will allow customers to modify their orders as needed and proceed to the checkout page to complete the payment process. The delivery status page will provide real-time updates on the status of their orders, including estimated delivery time.

The chat-bot feature will enable customers to communicate with the restaurant's customer service team and receive prompt assistance with their queries. This feature will enhance the customer experience by providing instant support and reducing wait times.

Overall, the MERN-based system will provide Swaras Cafe and Paratha House with an end-to-end solution for developing and maintaining their online ordering system, resulting in an enhanced customer experience and increased revenue opportunities.

***Keywords*—HTML, CSS, JavaScript, CSS flexbox, CSS swiper.js, CSS grid.**

I. Introduction

The coffee shop industry is highly competitive, and businesses need to differentiate themselves from their competitors to succeed. One way to do this is by providing an exceptional online experience that engages and informs customers about the coffee shop's unique offerings. The online presence of businesses has become increasingly important in today's digital world. With more and more consumers relying on the internet to find businesses and make purchasing decisions, it is essential for businesses to have a website that not only provides relevant information but also offers a seamless browsing experience across different devices. This research paper presents a complete responsive coffee shop website design that addresses the specific needs of coffee shop businesses. By using MERN, the website is designed to be responsive and user-friendly, ensuring that customers can easily navigate and access important information regardless of the device they use. The website's features include a responsive header/navbar with toggle effect, an image slider, a menu card section, a review touch slider, online booking, and a responsive footer section, providing customers with a seamless browsing experience. Additionally, this paper provides insights into the best practices for building effective and responsive coffee shop websites, including strategies for improving user experience and increasing customer engagement. By implementing these best practices, coffee shop businesses can establish a strong online presence, attract and retain customers, and ultimately achieve long-term success. By utilizing web technologies and following industry best practices, coffee shop owners can create an online presence that not only showcases their business but also attracts and retains customers.

II. Literature Survey

The paper proposes a touchpad-based food ordering system that uses an Android application. The touchpad is used by the restaurant staff to input the order details, and the Android application is used by the customers to place their orders. The system uses the Android operating system, and the touchpad likely runs on some hardware device like a tablet or a dedicated touchpad. The paper does not provide any specific information about the hardware or software technologies used in the implementation of the proposed system.

The authors have proposed an online food ordering system that allows customers to order food through a web-based application. The system provides a customizable menu and allows customers to select their preferred dishes, customize the order as per their preferences, and make the payment online. The authors have discussed the design and implementation of the system and presented the system architecture, modules, and workflows.

The authors have proposed a digital dining system for restaurants that uses an Android application to enhance the customer experience. The system comprises two main components, namely, the Android application and the server-side application. The Android application is used by customers to browse the menu, place orders, and make payments. The server-side application is used by the restaurant staff to manage orders, track payments, and update the menu.

The authors have proposed a digital ordering system for restaurants that uses an Android application to enhance the customer experience. The system allows customers to browse the menu, place orders, and make payments using their mobile devices. The system also provides real-time updates to the restaurant staff, allowing them to manage orders efficiently.

The authors have proposed a wireless food ordering system that allows customers to place their orders using handheld devices, such as personal digital assistants (PDAs) or mobile phones. The system uses wireless communication technologies such as Bluetooth and Wi-Fi to enable seamless communication between the handheld devices and the restaurant's server.

The authors have proposed a wireless food ordering system that allows customers to place their orders using handheld devices, such as smartphones or tablets, via a Wi-Fi network. The system also includes a real-time customer feedback mechanism that enables customers to rate their dining experience and provide feedback directly to the restaurant management.

The paper titled "A Study on TAM: Analysis of Customer Attitudes in Online Food Ordering System" was published in Elsevier Ltd. in 2012. The authors have conducted a study to analyze the customer attitudes towards online food ordering systems using the Technology Acceptance Model (TAM). The results of the study show that the perceived ease of use and perceived usefulness of online food ordering systems significantly affect the customers' attitudes towards these systems. Additionally, the study found that the customers' attitudes towards online food ordering systems positively affect their intention to use these systems.

I. METHODOLOGY

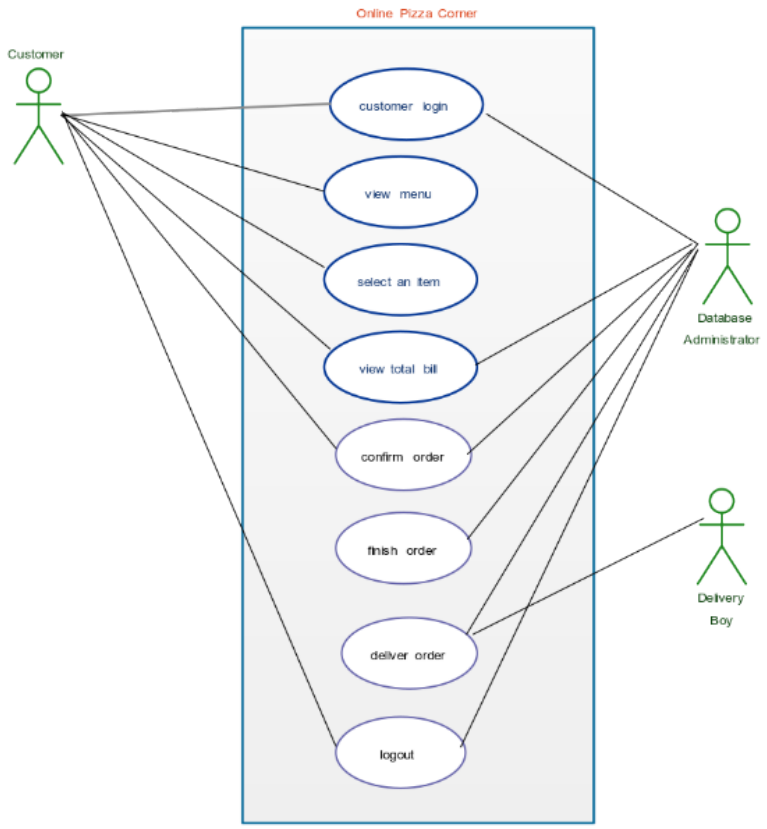


Fig.1. Flowchart of Café Management System

A. Procedure

I. Set up the backend: Use Node.js and Express to create the backend API for the website. Use MongoDB as the database to store the menu items, customer information, and order information.

II. Implement user authentication: Use JSON Web Tokens (JWT) to secure the website and allow users to sign up, log in, and log out. Use bcrypt to hash and store user passwords in the database.

III. Implement the menu page: Use React to create the menu page and allow users to browse the menu items. Use Axios to fetch the menu items from the backend API and display them on the page.

IV. Implement the cart page: Use React to create the cart page and allow users to add items to their cart, remove items from their cart, and view their total order cost. Use Redux to manage the state of the cart across different pages.

V. Implement the delivery status page: Use React to create the delivery status page and allow users to track the status of their order. Use Socket.io to send real-time updates to the user when their order is confirmed, in progress, or delivered.

VI. Implement the chatbot: Use Dialogflow to create a chatbot that can answer common customer questions and provide support. Integrate the chatbot with the website using React and Webhooks.

VII. Implement online payment: Use Stripe to allow users to pay for their order online using a credit card. Use Axios to send payment information to the backend API and process the payment. Use Stripe's API to handle payment confirmation and update the delivery status page accordingly.

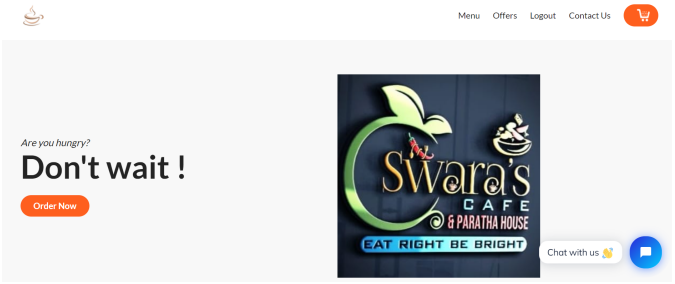


Fig.3. Steps to implement Sentiment Analysis on Twitter Datase

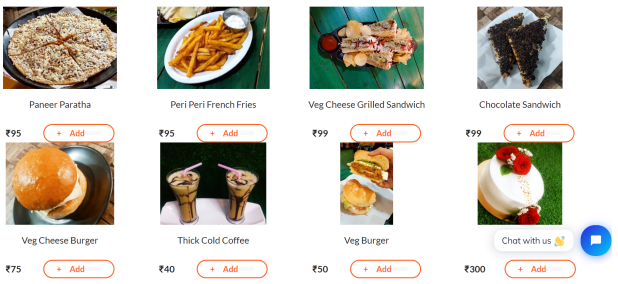


Fig.4 Menu of the app

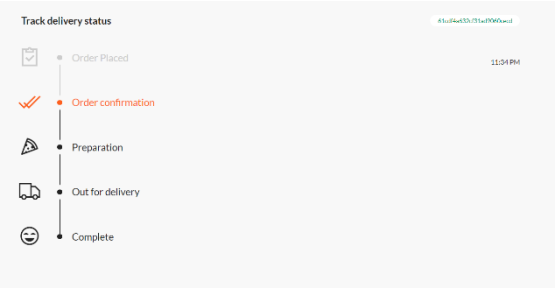


Fig.5.. Delivery status page of the app

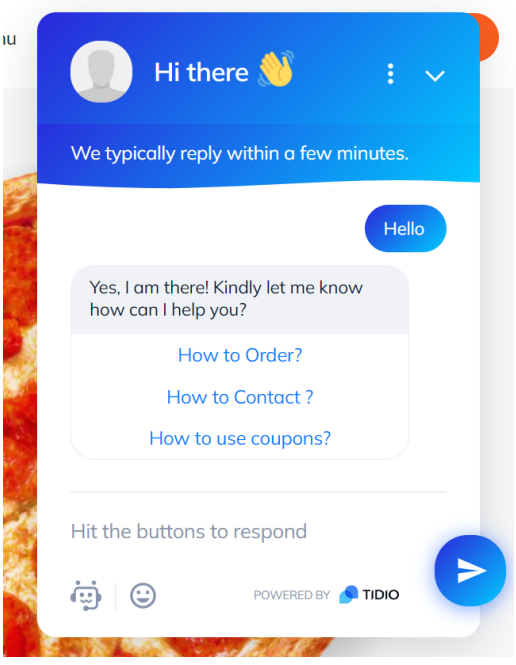
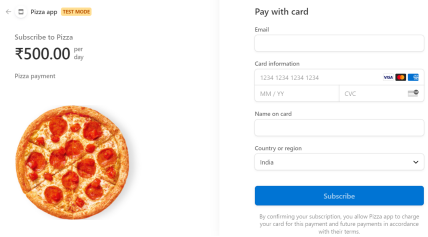


Fig.6.. Chat-Bot



1V. FUTURE SCOPE

There are several avenues for future research in the area of pizza websites. One area to explore is personalization, which can include customized pizzas, personalized recommendations, and saved orders. Another important area is mobile optimization, as more and more customers are using their smartphones to place orders. Additionally, integrating the pizza website with third-party platforms like social media, delivery services, and online payment systems can improve the customer experience. Analytics and reporting can help gather customer data and identify trends, while also making data-driven decisions. Finally, with an increased focus on sustainability and eco-friendliness, researchers can explore ways to make pizza websites more environmentally friendly, such as using eco-friendly packaging, sourcing ingredients locally, and reducing waste. By considering these future scope areas, researchers can improve the pizza ordering experience and meet the changing needs and expectations of customers.

1V. CONCLUSION

From now on, the current e-commerce business web application aims to provide critical reviews of relevant literature in the e-Business sector and to define key aspects of the process used throughout the project. Further learning and understanding of new technologies and new frameworks and testing tools will help the web application to grow and perform better. In the future, web development using various technologies could be beneficial to many businesses in India and around the world, as it creates an ecosystem of digitization and provides business easily to everyone in the world.

V. REFERENCES

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