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Foodie - Online Food Delivery with Customizable Orders

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Abstract*— This paper presents a food delivery website with customizable order options that aims to provide customers with a user-friendly platform where they can order food according to their preferences. Customers can customize their orders by selecting specific ingredients and instructions on the website, which has a large selection of menu items. This fixes the common issue of the limited customization options faced by customers with particular dietary requirements or preferences. The website can also be utilised by people who are ill and following a strict food plan recommended by their doctor. The website's user interface is designed to be easy to use and intuitive, and it includes detailed instructions for placing purchases and paying for them. Additionally, the website offers a dependable delivery service that makes sure that food is delivered to customers' doorsteps within the specified window of time. Overall, the food delivery website with customizable order options aims to serve a variety of clients with various dietary requirements and preferences by offering them a convenient and personalized online ordering experience

Index Terms*—Online food ordering, customizable orders, dietary preferences, user-friendly platform.

I. INTRODUCTION

With the rise of technology, the food industry has undergone significant changes in recent years. Online food ordering is the process of food delivery or takeout from a local restaurant through a web page or an online Application[1]. Online food ordering has become increasingly popular, and many restaurants and food businesses have adapted to the trend by offering delivery services. The emergence of online food delivery platforms has revolutionized the way food businesses operate, creating new opportunities for growth and expansion in the digital age[2]. However, customers often face limited customization options when ordering food online, which can be frustrating for people with particular dietary preferences or constraints

To address this issue, a food delivery website with customizable order options has been developed. The website aims to provide customers with a user-friendly platform where they can order food according to their preferences. The website offers a vast selection of menu items. Customers can make their own customized orders by specifying ingredients and instructions for the same.

The website resolves the frequent problem of the restricted customization possibilities faced by consumers with certain dietary restrictions or preferences.

Customers with special dietary requirements, such as those who are vegan, vegetarian, gluten-free, or have food allergies, can tailor their orders to suit their requirements. Additionally, customers can choose to have their orders customized based on their preferred ingredients or cooking techniques. The website makes sure that all consumers can enjoy their meals without compromising on their preferences or health issues by offering these personalized possibilities.

Apart from catering to dietary restrictions and preferences, online food delivery with customizable orders has the potential to serve another demographic: individuals who are ill and on a strict diet prescribed by their doctor. Frequently, these people are unable to prepare their own meals because they live alone. They can upload their recipes and place orders online using customizable orders, and the restaurant will fulfil them according to the details they supply. Ensuring they receive meals that meet their dietary needs without having to spend energy preparing, this can significantly improve their quality of life.

The user interface of the website is made to be simple and intuitive, with clear instructions for placing orders and making payments. Additionally, the website provides a reliable delivery service, ensuring that food is delivered to customers' doorsteps within the promised time frame.

Overall, the food delivery website with customizable order options aims to provide customers with a personalized and convenient online ordering experience. By offering a vast selection of menu items and customizable order options, the website hopes to cater to a wide range of customers with different dietary needs and preferences.

II. LITERATURE REVIEW

An overview of the technologies now in use in the field of online food delivery is provided in this section -

Rising labour costs provide a big challenge to firms in the food industry. Some advocate replacing human labour with contemporary technology to cut costs. The suggested remedy is an online system for placing meal orders that are intended for fast food establishments, takeaway, or college cafeterias. The system can automate the ordering procedure for the client as well as the restaurant, making it simpler and maybe

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spending less on labour. Any industry that delivers food might benefit from this idea. [3]

The suggested online meal ordering system is intended to solve the difficulties that people have while relocating to new cities. This system gives clients the option to order from restaurants or mess services, and it also features daily recommendations from restaurant and mess proprietors. The system offers real-time consumer feedback and ratings to restaurant and business owners, helping them prevent disastrous mistakes and inappropriate behaviors. Due to the growing popularity of smartphones, the suggested system has a wide variety of prospective consumers and can be utilized as a launchpad for developers. Overall, the proposed approach may result in an effective system of communication between the food industry's customers and producers. [4]

Customers are intended to have a simple and effective method of ordering meals from restaurants and mess services using the planned online food ordering system. Customers will be able to monitor their orders, keep a customer database, and give feedback and ratings to restaurants and other service providers using the system. The suggested solution will give customers and service providers real-time feedback while preventing fatal mistakes and unacceptable user behavior. The growing number of individuals moving to new cities and their initial consideration of 10–12 restaurants and mess services in 2–3 locations justifies the approach. Overall, this approach has the potential to give a variety of people access to a flexible and convenient food ordering service. [5]

Traditional food courts' on-site food ordering systems encounter a number of drawbacks, such as long lines, disorganized vendors, uncomfortable sitting, and worries about the transmission of diseases. Applications for ordering meals in food court business systems were developed to address these problems. creating a system for buyers and sellers that accepts electronic payments and lets customers place several orders at once, doing away with the need for lines and improving efficiency for all involved. The new approach will also lessen the chance of virus propagation, streamline the seller's tasks, and do away with direct customer-seller interactions. Overall, the suggested approach will make it easier for food court patrons and vendors to use online ordering and payment systems. [6]

A web application for restaurants that allows consumers to simply share and provide comments on their eating experiences. The software also has a chat box function that allows users to connect with one another in real-time. React,

Firebase, Tailwind CSS, MongoDB, Node JS, and Express JS were utilised in the app's development. Overall, the app offers users a fun and engaging platform for connecting with other foodies and sharing tips, making it more participatory and user-friendly. [7]

A standard restaurant meal order procedure consists of numerous steps, beginning with viewing a paper-based menu and ending with alerting the server for ordering products. An alternate system, known as the "Food Pre-Order System Using Web-Based Application," has been presented. Customers can use their smartphones to create their orders before entering the eatery. When the consumer visits the restaurant, he or she can confirm the saved order by touching the smartphone. The pre-ordered items that have been selected are presented on the kitchen screen, and when confirmed, an order slip is created for further processing. Customers can choose pre-order transactions in a simple and convenient manner using this technology. [8]

III. PROPOSED SYSTEM

The proposed system for the research paper on the online food delivery system with customized recipe orders will include the following features:

Login: The system will have a secure login process for customers to create an account, track their deliveries, and view the status of their customized recipe.

Add to Cart: Customers will be able to go through the items in the menu and add items to the cart page for order placement.

Place Order: The system will provide customers with a seamless checkout process with payment options, providing details of the delivery address.

Customize Recipe Order Placing: Customers who want to create their own recipe can upload their customized recipe with proper ingredients and instructions, which the admin will approve and update the price if it is feasible, and then only it can be added to their cart and place an order.

Admin Approval: The admin will review the customized recipe orders to ensure they are doable and update the status accordingly with price, if the status is changed to approved with price then the customer will receive a message notification about the same.

Feedback: The system will allow customers to provide feedback by giving ratings and reviews after the orders are delivered.

The proposed system aims to provide customers with a convenient and user-friendly interface for online food ordering, including customized recipe options for customers with dietary restrictions. The admin approval process ensures the quality and feasibility of the customized recipe orders, and the feedback system allows for continuous improvement of the system's functionality and service quality.

IV. METHODOLOGY

The proposed system is an online food ordering and delivery platform that enables customers to browse a wide range of food items from the menu, place orders, and

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customize and create their orders as per their liking. The system also allows customers to create and submit their recipes for approval by the admin, who can review and approve the recipe with appropriate pricing.

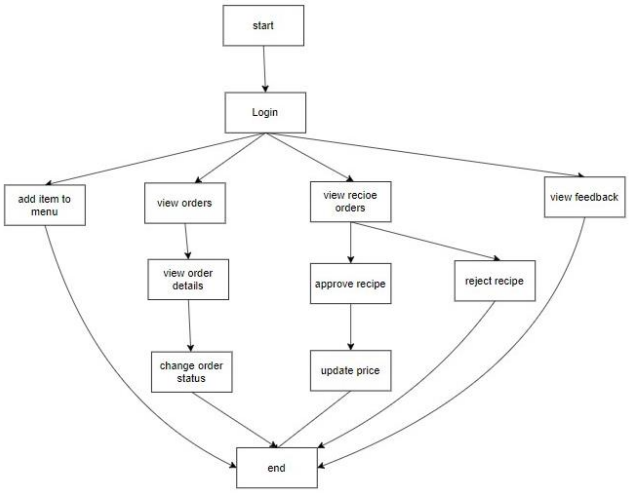

Figure 1. Admin Flow

The home page of the system presents the customers with an overview of the menu and allows them to add food items to their cart. Once the customer creates an account and logs in, they can view their profile, and track their current orders. To place an order, the customer can navigate to the menu page and select the desired food items, which are added to the cart. The system also allows customers to increase or decrease the number of items in the cart, and delete items.

The system provides a comprehensive and customizable recipe creation feature for customers. Customers can create their recipes with a name, specify the total grams of each ingredient, add all the necessary ingredients, and provide detailed instructions for preparing the dish. The system allows customers to submit the recipe for admin approval once they are complete. After submitting a recipe, the customer can track its status and view any updates made by the admin.

On the website, once you have selected the items you wish to order, you can add them to your cart by clicking on the "Add to Cart" button. The selected items will then be visible in your cart, and you can proceed to checkout once you have finished adding all desired items [9]

The admin is responsible for reviewing the recipes submitted by customers and either approving or rejecting them. If the admin approves a recipe, they will also set a price for it so that the customer can then add the recipe to their cart. Once a recipe is approved and priced by the admin, it will appear on the recipe page for customers to add to their carts.

During checkout, the customer is required to provide their address for delivery. The customer can view the status of their orders at any time, including whether the order has been confirmed, prepared, delivered, or completed. Once the order is delivered, the customer can provide feedback on the order received.

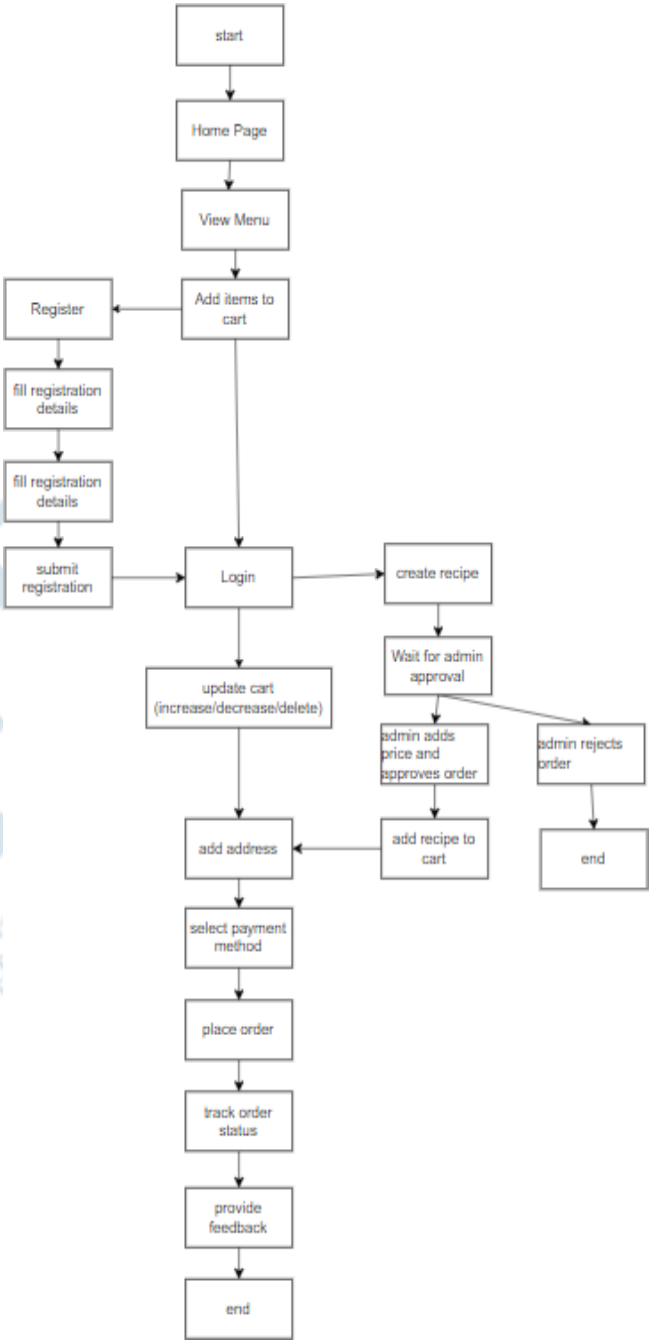

Figure 2. Customer Flow

The admin dashboard of the proposed system offers a comprehensive overview of all the orders placed by different customers. The dashboard provides the admin with detailed information on each order, including the customer's name and address, order time, payment status, and order status. The admin can change the order status based on the current

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progress of the order, such as confirmed, prepared, delivered, or completed. This allows the admin to keep track of all the orders and ensure timely delivery to the customers. In addition to managing orders, the admin also has the ability to add new food items to the menu. The admin can upload a new item along with its description, image, and price. This feature allows the admin to update the menu with new and exciting items to keep the customers interested and engaged.

The feedback page on the admin dashboard allows the admin to view all the feedback and reviews given by customers. This enables the admin to get a better understanding of the customer's preferences and concerns and take corrective action, if necessary. The admin can also use the feedback to improve the quality of service and food items offered by the system.

Furthermore, the system provides the admin with the ability to approve or reject a recipe submitted by a customer. The admin can review the recipe and decide whether to add it to the menu or reject it. If approved, the admin can also update the price of the recipe based on the ingredients used and the level of customization. This feature allows the system to offer a wide range of food items catering to the diverse tastes and preferences of the customers.

Overall, the proposed system provides a seamless and user-friendly experience for customers to place and track orders, customize their orders, and create and submit their recipes. The system also provides a convenient platform for the admin to manage orders, approve recipes, and update the menu.

V. SOFTWARE REQUIREMENT

The following are the software requirements for the research paper on the online food delivery system with customized recipe orders:

1. React Framework: The system will be built using the React framework to provide a user-friendly interface for customers to browse the menu, add items to their cart, and place orders seamlessly.
2. Node JS: Node JS will be used as the server-side programming language to handle requests from the client side and process them efficiently.
3. Express JS: Express JS will be used as a middleware for Node JS to simplify the development process and enable easy routing and handling of HTTP requests.
4. MongoDB: MongoDB will be used as the database management system to store customer information, order details, and feedback data securely.
5. VS Code: VS Code will be used as the integrated development environment (IDE) to develop and test the system. It is a lightweight, open-source IDE that provides powerful features such as code editing, debugging, and version control.

The software requirements aim to provide a robust and scalable online food delivery system with customized recipe orders. The React framework provides a responsive and intuitive interface, while Node JS and Express JS provide a powerful and flexible server-side architecture. MongoDB ensures the security and scalability of the database management system, and VS Code provides an efficient and user-friendly IDE for developing and testing the system. [10]

VI. HARDWARE REQUIREMENTS

A personal Laptop with an Intel Core i5 64-bit processor, an 8GB RAM graphics card, and the Microsoft Windows 10 operating system was used.

VII. RESULT

The customized online food delivery system was developed to address the issue of limited customization options faced by customers with specific dietary needs or preferences. Customers could upload their own recipes and personalize their food orders depending on their preferences and dietary restrictions using the system. In order to construct the system, features like login, add to cart, place order, customized recipe order placement, online payment option, and feedback after delivery were implemented.

After receiving client feedback, the restaurant can assess how well they are doing at fulfilling orders. Customers may rate and comment on the orders they had received using the feedback function.

However, the implementation of the customized food delivery system faced a few challenges. The procedure for approving the uploaded recipes posed one significant problem. The administrator had to make sure the recipes could be prepared and complied with the consumers' dietary restrictions. The approval of some of the recipes was delayed as a result of the extra time and resources needed for this process. However, the system is set up to alert the user when the administrator accepts the recipe and uploads the associated price.

The customized online food delivery system has been successfully implemented and evaluated. Customers may now order products online in a personalized and practical way thanks to the system. The feedback process has made it possible to advance and deal with any issues clients may have. The technology has the potential to become a well-liked choice for customers with particular dietary demands or preferences seeking out customized food delivery.

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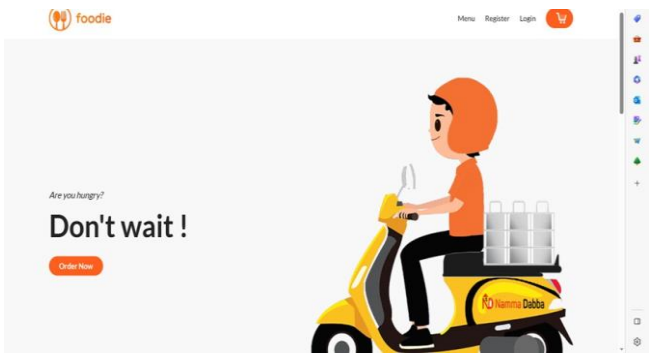

Figure 3. Home Page

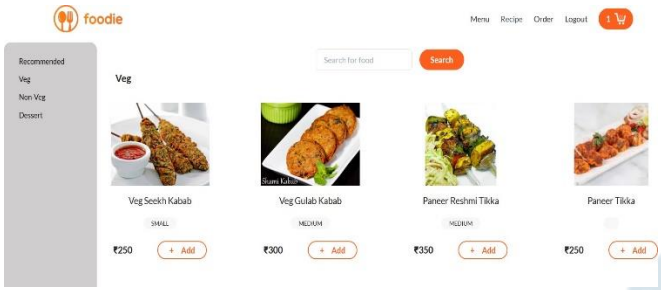

Figure 4. Menu Page

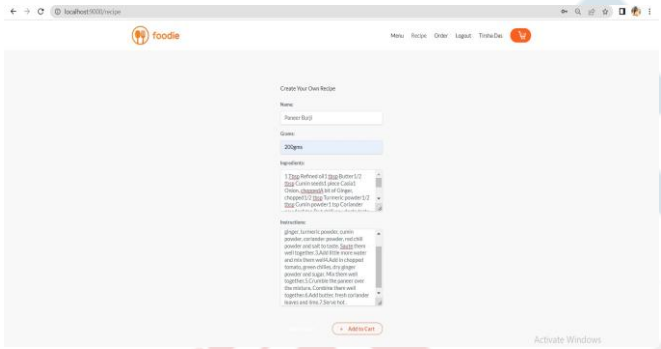

Figure 5. Customize Recipe Page

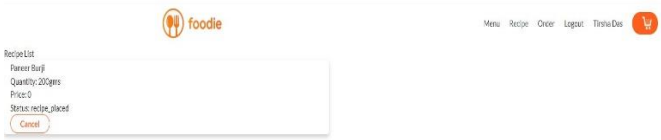

Figure 6. Recipe Pending to be approved by Admin

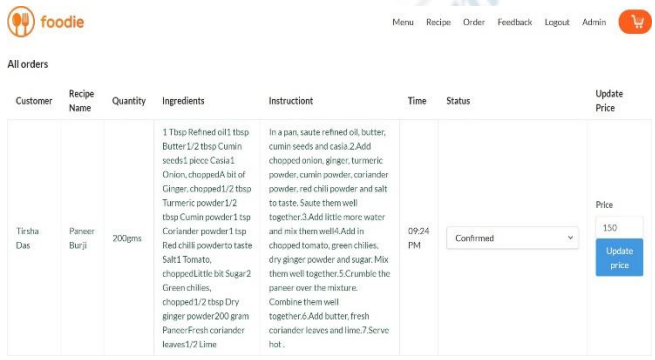

Figure 7. Admin approves the recipe and updates price

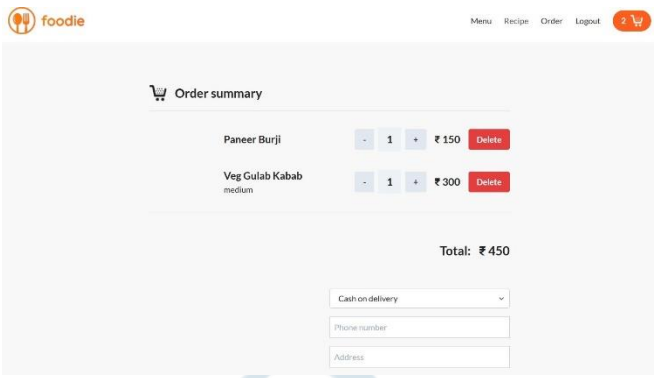

Figure 8. Cart Page

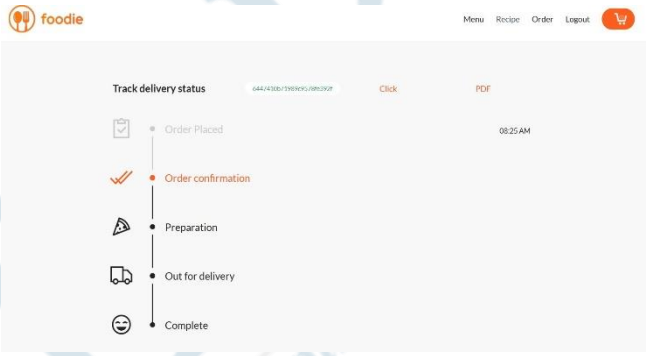

Figure 9. Order status

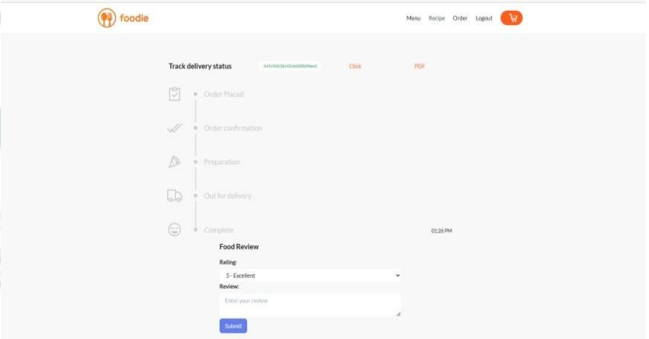

Figure 10. Feedback page after completion of delivery

Figure 11. Admin's Feedback Page

VIII. CONCLUSION

Overall, the proposed system has the potential to revolutionize the way customers order food online, providing them with a more customized and personalized experience. By addressing the limitations faced by customers with dietary restrictions, the system can cater to a larger and more diverse customer base, resulting in increased revenue and customer

loyalty. Moreover, the system's feedback mechanism allows for continuous improvement, ensuring that the system is always meeting customers' evolving needs and expectations.

In the future, the proposed system can be further enhanced by incorporating more advanced features such as machine learning algorithms that can predict customers' food preferences based on their past orders, or voice-activated commands that can make the ordering process even more convenient. The system can also be expanded to include other customization options such as portion sizes, cooking styles, and packaging preferences.

Overall, the proposed system offers a promising solution to the challenges faced by customers with dietary restrictions or preferences when ordering food online. With its easy-to-use interface, customizable options, and reliable service, the system has the potential to transform the online food delivery industry, providing customers with a more personalized and satisfying experience.

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