ONLINE FOOD ORDERING AND DELIVERY SYSTEM

A CAPSTONE PROJECT

Submitted By

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BONAFIDE CERTIFICATE

This is to certify that the project report entitled **Online Food Ordering and delivery system** submitted by T. Deepshika Shivani to Saveetha School of Engineering, Saveetha Institute of Medical and Technical Sciences, Chennai, is a record of bonafide work carried out by him/her under my guidance. The project fulfils the requirements as per the regulations of this institution and in my appraisal meets the required standards for submission.

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ABSTRACT

The online food ordering and delivery system is a comprehensive software application designed to streamline and enhance the food purchasing experience for both customers and restaurants. In an era where convenience, speed, and user-friendliness are paramount, this system enables customers to browse digital menus, select food items, customise their orders, and arrange delivery all from the comfort of their homes. The system's interface supports seamless order placement, where users can view available menu options, specify quantities, and receive an automatic calculation of the total cost. Additionally, the system collects essential delivery information such as the customer's name, address, and contact number, ensuring that their order is delivered efficiently and accurately. For restaurants, the system provides numerous operational benefits, allowing them to manage incoming orders, reduce human error, and expand their reach to a wider customer base without the need for additional physical infrastructure.

This technology not only improves the customer experience by minimising wait times and enhancing accessibility to a variety of meals but also allows restaurants to optimize their workflows and increase overall revenue. The system can be integrated with payment gateways to facilitate secure transactions and even offer real-time tracking of orders to enhance customer engagement. Moreover, data analytics integrated within the system can provide valuable insights into customer preferences, ordering patterns, and inventory management, enabling restaurants to refine their services and marketing strategies. As online food delivery continues to grow in demand, this system is an essential solution for modern food service operations, offering a platform that prioritizes efficiency, customer satisfaction, and business scalability in an increasingly digital world. The adoption of such systems is crucial in meeting the evolving expectations of today's consumers and adapting to the competitive dynamics of the food service industry.

INTRODUCTION

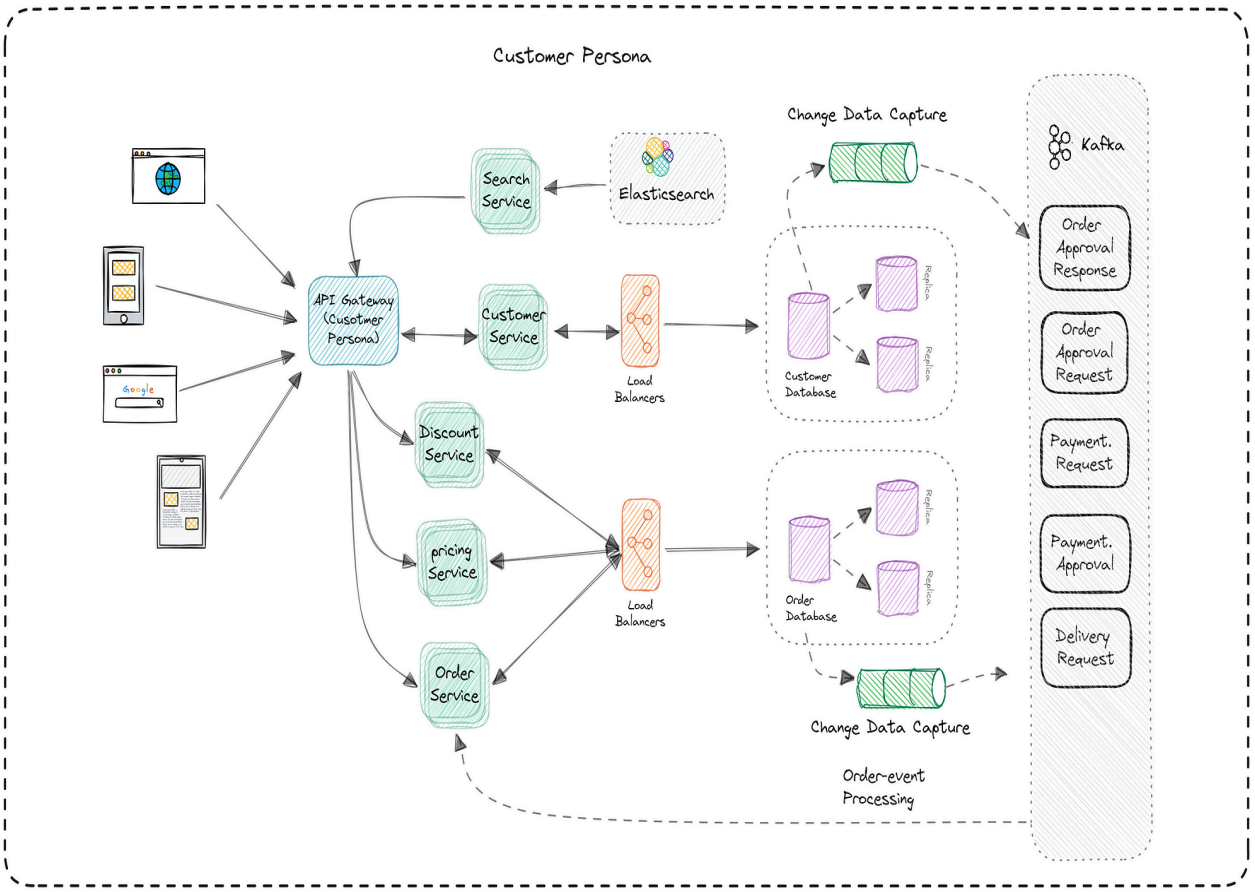
The online food ordering and delivery system has transformed the landscape of the food service industry, offering unprecedented convenience to both customers and restaurants. With the increasing adoption of digital technologies, more consumers are opting for online platforms to order meals from their preferred restaurants without the need for physical visits. This system provides a streamlined interface where users can easily browse diverse menus, customize their orders, and have their food delivered directly to their location. The demand for online food delivery has been driven by factors such as the growth of mobile applications, changing consumer lifestyles, and the convenience of contactless services, especially in recent years.

For customers, this system reduces the time and effort required to place an order, making it possible to enjoy a variety of cuisines from the comfort of their home, office, or any preferred location. They no longer have to wait in long lines or call the restaurant to place orders. Furthermore, features like estimated delivery time, real-time order tracking, and secure online payments enhance the user experience, making it more reliable and accessible. On the other hand, restaurants benefit from this system by reaching a broader audience, managing orders more efficiently, and increasing revenue without the need for additional physical infrastructure.

The online food ordering and delivery system encompasses various essential components, including menu management, order processing, payment gateways, and delivery logistics. By integrating these elements, the system ensures a smooth workflow from the moment an order is placed to the time it reaches the customer. In addition to improving operational efficiency, the system provides valuable insights to restaurants through data analytics, allowing them to optimize their services, manage inventory, and offer personalized promotions to customers.

As the food service industry continues to evolve, the online ordering and delivery system plays a critical role in adapting to changing market dynamics, where convenience, speed, and user satisfaction are paramount. Whether for large restaurant chains or small local eateries, such systems offer a modern solution that meets the needs of today’s consumers, ultimately reshaping how food is ordered, prepared, and delivered in the digital age.

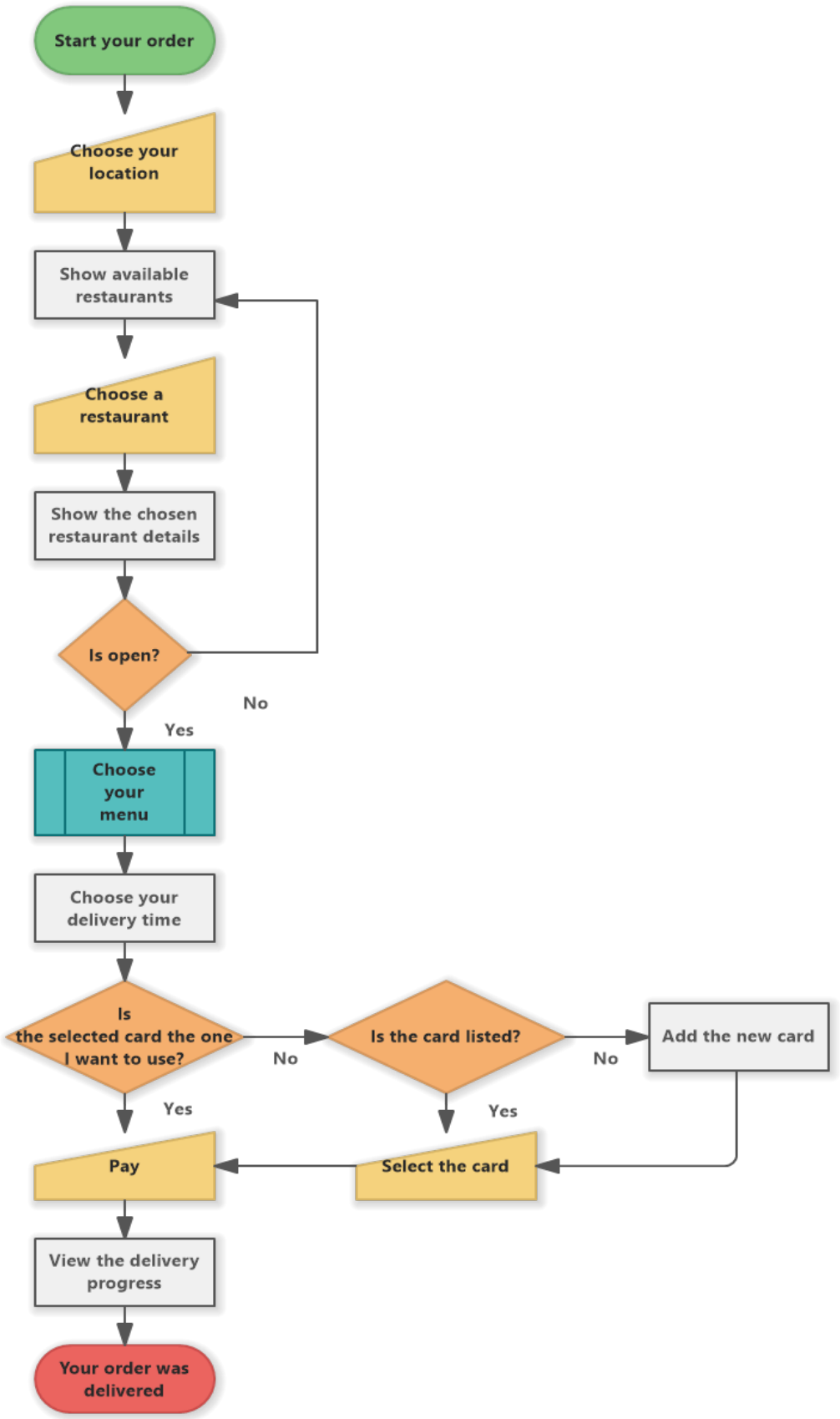
ARCHITECTURE DIAGRAM



The architecture of an online food ordering and delivery system is composed of several key components that work together to provide a seamless experience for both customers and restaurants:

1. **User Interface (UI):** This is the front-end component where customers interact with the system. It includes web or mobile interfaces where users can browse menus, select food items, place orders, and provide delivery information.
2. **Application Server:** The core of the system, the application server processes customer requests, manages order workflows, calculates totals, and coordinates communication between various system components. It ensures that user actions are translated into back-end operations.
3. **Database:** This component stores crucial information such as restaurant menus, item prices, customer details, order history, and delivery addresses. It supports querying and updating data for real-time transactions.
4. **Payment Gateway:** This component integrates with the system to securely process payments. It handles customer transactions, supports various payment methods, and ensures secure communication of financial data.

FLOW CHART


Start your order
Choose your location
Show available restaurants
Choose a restaurant
Show the chosen restaurant details
Is open?
No
Yes
Choose your menu
Choose your delivery time
Is the selected card the one I want to use?
No
Is the card listed?
No
Add the new card
Yes
Yes
Pay
Select the card
View the delivery progress
Your order was delivered

UML DIAGRAM

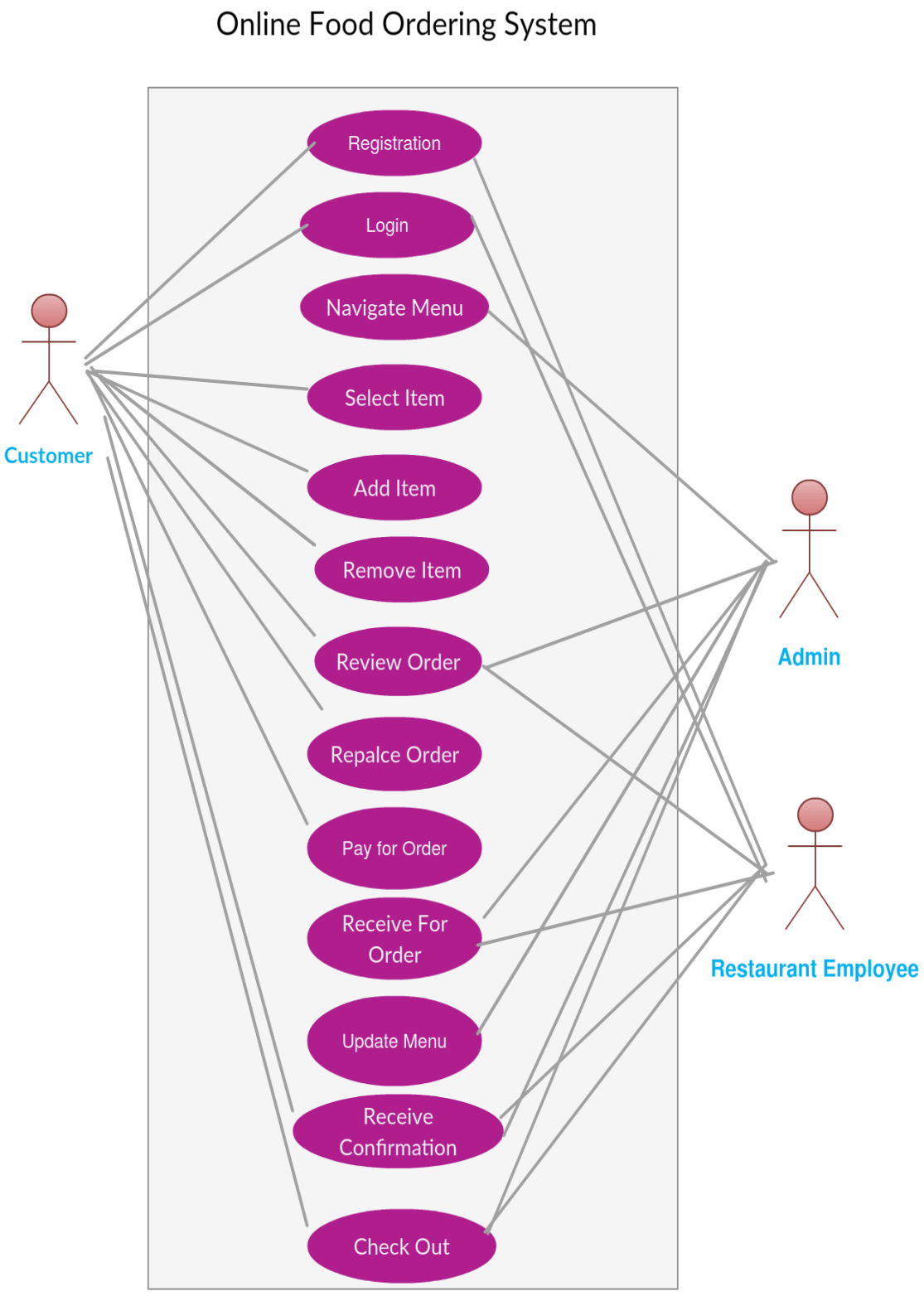
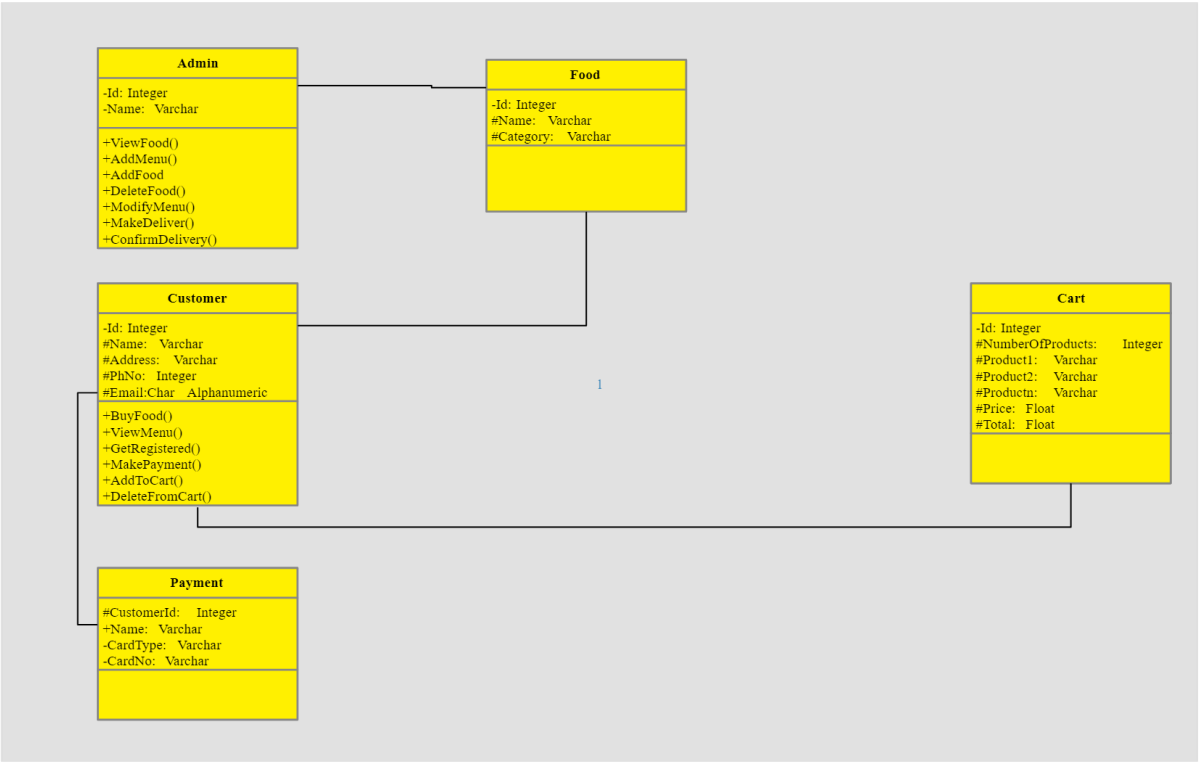


Figure : Use Case Diagram

CLASS DIAGRAM

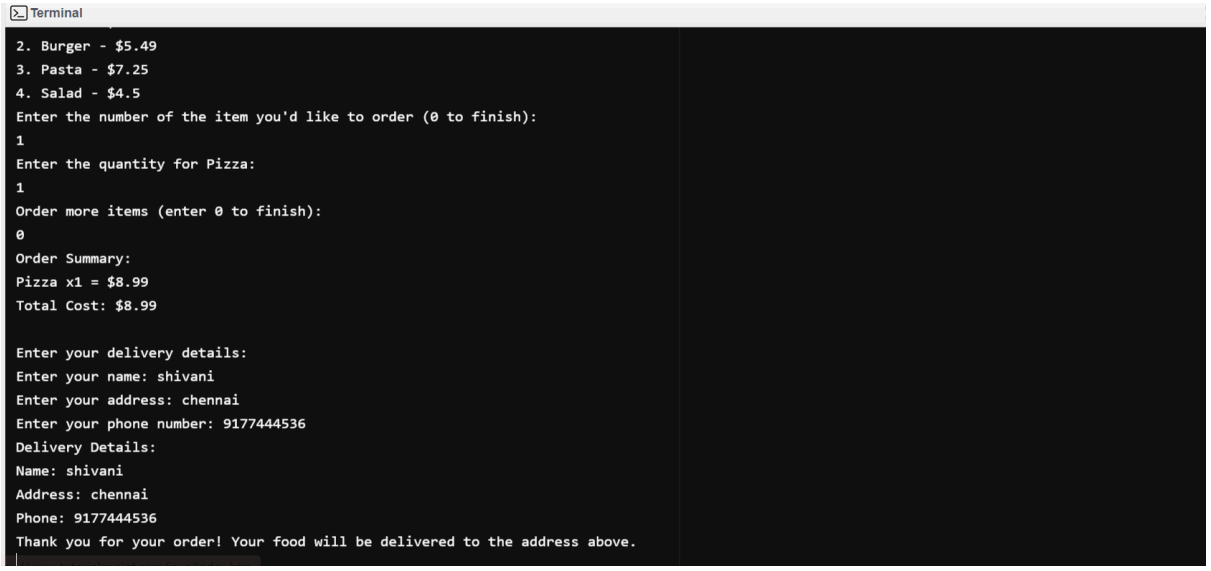


CODE IMPLEMENTATION

```
import java.util.Scanner;
class FoodOrderingAndDeliverySystem {
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      String[] foodItems = {"Pizza", "Burger", "Pasta", "Salad"};
      double[] prices = {8.99, 5.49, 7.25, 4.50};
      int[] quantities = new int[4];
      double totalCost = 0;
      System.out.println("Welcome to the Online Food Ordering and Delivery System!");
      System.out.println("Here is the menu:");
      for (int i = 0; i < foodItems.length; i++) {
         System.out.println((i + 1) + ". " + foodItems[i] + " - $" + prices[i]);
      }
      System.out.println("Enter the number of the item you'd like to order (0 to finish): ");
      while (true) {
         int choice = sc.nextInt();
         if (choice == 0) {
            break;
         }
         if (choice < 1 || choice > foodItems.length) {
            System.out.println("Invalid choice. Try again.");
            continue;
         }
         System.out.println("Enter the quantity for " + foodItems[choice - 1] + ": ");
         int quantity = sc.nextInt();
         quantities[choice - 1] += quantity;
         System.out.println("Order more items (enter 0 to finish): ");
      }
      for (int i = 0; i < foodItems.length; i++) {
         if (quantities[i] > 0) {
            totalCost += quantities[i] * prices[i];
         }
      }
      System.out.println("\nOrder Summary:");
      for (int i = 0; i < foodItems.length; i++) {
         if (quantities[i] > 0) {
```

```
            System.out.println(foodItems[i] + " x" + quantities[i] + " = $" + (quantities[i] *
prices[i]));
            }
        }
        System.out.println("Total Cost: $" + totalCost);
        System.out.println("\nEnter your delivery details:");
        System.out.print("Enter your name: ");
        sc.nextLine();
        String name = sc.nextLine();
        System.out.print("Enter your address: ");
        String address = sc.nextLine();
        System.out.print("Enter your phone number: ");
        String phoneNumber = sc.nextLine();
        System.out.println("\nDelivery Details:");
        System.out.println("Name: " + name);
        System.out.println("Address: " + address);
        System.out.println("Phone: " + phoneNumber);
        System.out.println("\nThank you for your order! Your food will be delivered to the
address above.");
    }
}
```

OUTPUT SCREENSHOT



CONCLUSION

The online food ordering and delivery system has emerged as a transformative solution in the food service industry, revolutionizing how customers interact with restaurants and access their meals. By incorporating essential components such as an intuitive user interface, robust application server, comprehensive database, secure payment gateway, and efficient delivery management system, this technology ensures that the entire process from browsing the menu to receiving the order at the doorstep is smooth, secure, and convenient. For customers, it offers the ability to explore diverse cuisines, place orders at any time, and enjoy the convenience of having food delivered to their preferred location, reducing the need for physical visits or long waits. Meanwhile, for restaurants, the system provides significant operational advantages, allowing them to manage orders more efficiently, reduce errors, and reach a broader customer base without the constraints of physical infrastructure. Furthermore, by integrating features such as real-time tracking and payment solutions, the system enhances transparency and trust between customers, restaurants, and delivery services. The use of data analytics also offers restaurants valuable insights into consumer behavior, enabling them to improve their offerings, optimize inventory management, and implement personalized marketing strategies. As digital technologies continue to shape consumer expectations and business models, the adoption of online food ordering and delivery systems will become increasingly critical to maintaining competitiveness in the food service industry. This system not only caters to the growing demand for convenience but also creates a framework for scalable and adaptable service delivery in an ever-evolving marketplace. Ultimately, the online food ordering and delivery system is not just a convenience tool but a cornerstone in the future of food service, offering a practical, efficient, and customer-focused solution that benefits both consumers and providers.

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