UNIVERSITI TEKNOLOGI MALAYSIA

FALCULTY OF COMPUTING

SESSION: II 2025/2026

PROGRAM/CLASS:

SECJ3623

COURSE:

MOBILE APPLICATION PROGRAMMING

LECTURER:

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ASSESSMENT:

PROJECT PROPOSAL

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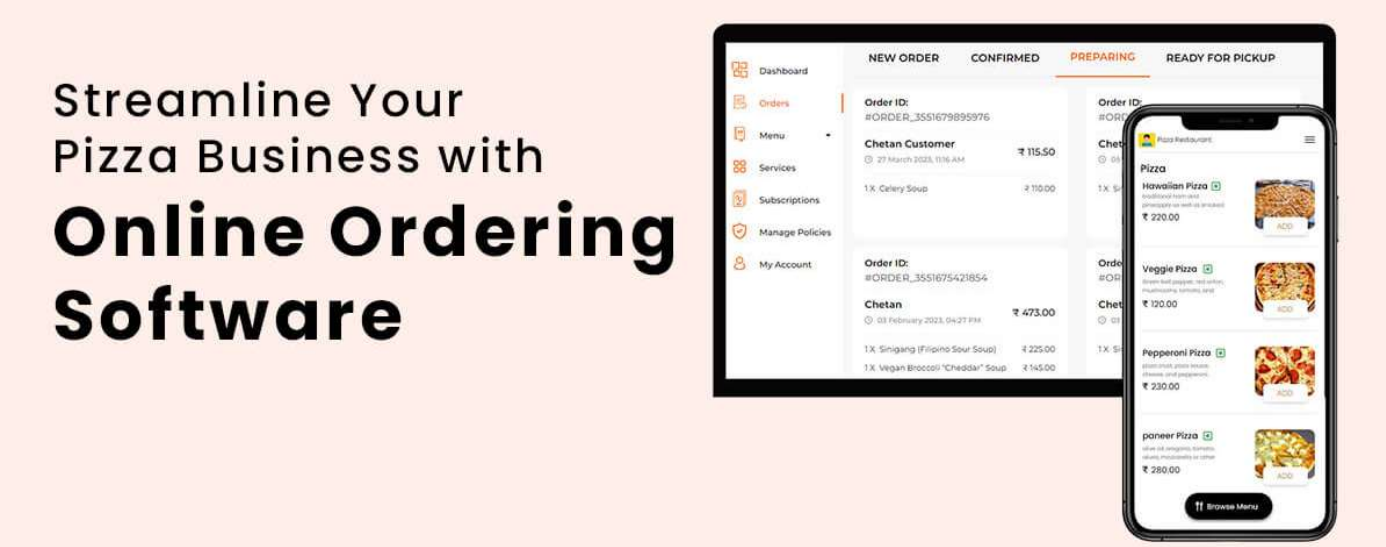
Project Background

With the rapid growth of digital technology and online food delivery services, customer expectations for fast, convenient, and accurate ordering systems have increased significantly. Traditional pizza ordering methods, such as phone calls or walk-in orders, are time-consuming and prone to human errors like incorrect orders, miscommunication, and delays. Customers also lack real-time information about menu availability, order status, and delivery time.



The Pizza Ordering System is designed to provide an efficient, user-friendly online platform where customers can browse the menu, customize pizzas, place orders, and make payments digitally. For pizza shop owners, the system helps manage orders, track deliveries, update menus, and analyze sales more effectively. This system improves operational efficiency, enhances customer satisfaction, and supports business growth in a competitive food service market.

Problem Statement

Many pizza restaurants still rely on traditional ordering methods such as walk-in customers and phone calls. These methods are often inefficient and prone to human error, including incorrect orders, missing items, and misunderstandings between customers and staff. During busy hours, handling a high volume of orders manually becomes challenging, leading to long waiting times and reduced service quality.

From the customer's perspective, the lack of an online ordering platform causes inconvenience. Customers are unable to easily browse the full menu, customize their pizzas, or receive real-time updates on order status and delivery progress. This often results in frustration, uncertainty about delivery times, and a poor overall ordering experience.

For business owners, the absence of a centralized ordering system makes it difficult to manage orders, track sales, and maintain accurate records. Manual processes limit the ability to analyze customer preferences, control inventory efficiently, and improve decision-making. Therefore, an automated Pizza Ordering System is needed to streamline operations, reduce errors, and enhance both customer satisfaction and business efficiency.

Objectives

The primary objective of the Pizza Ordering System is to provide a convenient and efficient platform that allows customers to place pizza orders online with ease. The system aims to reduce manual work, minimize ordering errors, and shorten waiting times by automating the entire ordering process from menu selection to payment and order confirmation. Another objective is to enhance customer satisfaction by enabling features such as pizza customization, real-time order tracking, and multiple payment options. By offering a user-friendly interface, the system ensures that customers can browse the menu, select items, and place orders quickly and accurately from any location. Additionally, the system aims to assist pizza shop owners and staff in managing daily operations more effectively. This includes efficient order management, menu updates, sales tracking, and report generation to support better decision-making and business growth

1. To provide an easy-to-use online platform for customers to place pizza orders anytime and from anywhere.
2. To reduce manual ordering errors by automating the order placement and processing system.
3. To allow customers to customize pizzas based on size, crust type, and toppings.
4. To improve customer satisfaction through faster order processing and real-time order status updates.
5. To enable secure and convenient online payment options.
6. To assist restaurant staff in managing and tracking multiple orders efficiently.
7. To allow administrators to manage menus, prices, and availability easily.
8. To generate sales and order reports to support business analysis and decision-making.
9. To reduce waiting time during peak hours by streamlining the ordering workflow.
10. To enhance overall operational efficiency of the pizza business.

Scope

The scope of the Pizza Ordering System includes functionalities for both customers and administrators. Customers can register or log in, view the menu, customize pizzas (size, crust, toppings), place orders, make online payments, and track the status of their orders. The system also provides order confirmation and notifications to keep customers informed.

For administrators, the system allows management of menu items, prices, orders, and delivery status. Admin users can view incoming orders in real time, update order progress, manage user accounts, and generate sales and order reports. The system supports basic inventory awareness to prevent ordering unavailable items.

The system is limited to online ordering and management processes and does not cover physical food preparation or third-party delivery logistics in detail. However, it is designed to be scalable and can be enhanced in the future to include features such as loyalty programs, advanced inventory management, and integration with external delivery services.

Target users and user needs identified

1. **Customers**

Target Users:
General public, including students, working professionals, families, and frequent online food buyers.

User Needs:

- Ability to browse the pizza menu with clear descriptions and prices.
- Options to customize pizzas (size, crust, toppings, add-ons).
- Simple and fast order placement process.
- Secure and convenient online payment methods.
- Real-time order status and delivery tracking.
- Order confirmation and notifications.
- Access to order history and repeat orders easily.

2. **Restaurant Staff**

Target Users:
Order handlers, kitchen staff, and delivery coordinators.

User Needs:

- Real-time access to incoming orders.
- Clear order details including customization and special instructions.
- Ability to update order status (preparing, ready, delivered).
- Reduced manual paperwork and phone-based coordination.
- Efficient handling of multiple orders during peak hours.

3. Administrator / Manager

Target Users:
Pizza shop owner, store manager, or system administrator.

- **User Needs:**
- Ability to manage menu items, prices, and availability.
- Control over user accounts and order management.
- Access to sales reports and order analytics.
- Monitoring of daily operations and system performance.
- Secure access to administrative functions.

Proposed Features

1. User Registration and Login
The system allows customers to create an account using their email or phone number and log in securely. This enables personalized services such as saving delivery addresses, viewing order history, and faster checkout for repeat orders.

2. Digital Menu Management
Customers can view a complete and updated pizza menu with prices, descriptions, and images. The system ensures only available items are displayed, while administrators can easily add, update, or remove menu items and prices.

3. Pizza Customization
Customers can customize their pizzas by selecting size, crust type, toppings, and additional add-ons. The system automatically updates the total price based on selected options.

4. Online Ordering System
The system provides a smooth ordering process where customers can add items to a cart, review orders, and confirm purchases. This reduces order errors and improves ordering efficiency.

5. Secure Online Payment
Multiple payment methods such as online banking, e-wallets, or cash-on-delivery can be supported. The system ensures secure payment processing and generates payment confirmation.

6. Real-Time Order Tracking
Customers can track the status of their orders in real time, including stages such as order received, preparing, out for delivery, and delivered.

7. Order Management for Staff
Restaurant staff can view incoming orders, update order status, and manage multiple orders efficiently through an admin dashboard.

8. Notifications and Alerts
Automatic notifications are sent to customers for order confirmation, payment status, and delivery updates via email or in-app alerts.

9. Reporting and Analytics
Administrators can generate reports on daily sales, popular items, and order history to support business analysis and decision-making.

10. Security and Access Control
The system ensures secure access with role-based permissions for customers, staff, and administrators to protect sensitive data.

Project Timeline or Milestone

Phase 1: Project Initiation & Planning (Week 1)

- Define project objectives and scope
- Identify target users and system requirements
- Prepare project plan and timeline

  Milestone: Project plan approved

Phase 2: Requirements Analysis (Week 2)

- Gather functional and non-functional requirements
- Identify system features and constraints
- Prepare Software Requirements Specification (SRS)

  Milestone: Requirements document completed

Phase 3: System Design (Week 3)

- Design system architecture and database schema
- Create UI wireframes and use case diagrams
- Define user roles and system workflows

  Milestone: System design finalized

Phase 4: System Development (Weeks 4–6)

- Develop user registration and login module
- Implement menu management and pizza customization
- Develop order processing and payment modules

  Milestone: Core system functions implemented

Phase 5: Testing & Debugging (Week 7)

- Perform unit testing and integration testing
- Fix bugs and improve system performance
- Conduct user acceptance testing (UAT)

  Milestone: System tested and validated

Phase 6: Deployment & Documentation (Week 8)

- Deploy the Pizza Ordering System
- Prepare user manuals and technical documentation

- Final system review and submission
  Milestone: System successfully deployed

Gantt Chart – Pizza Ordering System (Oct 2025 – 6 Feb 2026)

No.	Project Phase	Start Date	End Date	Oct 2025	Nov 2025	Dec 2025	Jan 2026	Feb 2026
1	Project Initiation & Planning	01 Oct 2025	15 Oct 2025	[redacted]				
2	Requirements Analysis	16 Oct 2025	31 Oct 2025	[redacted]				
3	System Design	01 Nov 2025	20 Nov 2025		[redacted]			
4	System Development	21 Nov 2025	31 Dec 2025		[redacted]	[redacted]		
5	Testing & Debugging	01 Jan 2026	20 Jan 2026				[redacted]	
6	Deployment & Documentation	21 Jan 2026	06 Feb 2026				[redacted]	[redacted]

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