CHAPTER 1

INTRODUCTION

A Restaurant Management System is a vital application designed to efficiently handle the wide range of operations involved in running a restaurant, including order processing, menu management, billing, inventory tracking, and customer information handling. As restaurants experience high customer inflow and deal with numerous daily transactions, traditional manual methods often become slow, error-prone, and difficult to manage.

To address these challenges, a computerized, database-driven system offers a reliable, accurate, and streamlined solution.

This project focuses on designing and implementing a Restaurant Management System using core database management concepts. The system stores and manages essential data such as menu items, categories, orders, tables, customers, staff, and billing details. By integrating a structured database, the system enables quick data retrieval, seamless updates, minimized redundancy, and enhanced data accuracy.

The primary goal of this mini project is to demonstrate how database technologies—such as SQL, relational schema design, normalization, and query processing—can be applied to build an efficient real-world management application. The system provides key functionalities including placing and modifying orders, generating bills, managing menu items, tracking inventory, reserving tables, and generating daily or monthly reports.

Overall, this Restaurant Management System highlights the significance of database systems in developing scalable, user-friendly, and efficient management platforms. It showcases how proper data modeling and structured storage transform complex and repetitive manual tasks into an automated, cohesive solution, ultimately leading to improved service quality, enhanced customer experience.

CHAPTER 2

PROJECT DESCRIPTION

The Restaurant Management System is a web-based application developed using HTML, CSS, PHP, and MySQL to automate and streamline the various operations involved in running a restaurant. The primary objective of this project is to create an interactive and user-friendly platform where staff or customers can manage orders, view menu items, generate bills, and handle table reservations efficiently. The front end of the system is built using HTML for structuring content and CSS for styling, ensuring a modern, clean, and responsive user interface. The backend is implemented using PHP, which manages server-side operations such as processing orders, validating inputs, updating inventory, generating invoices, and interacting with the database. MySQL stores all essential data, including menu items, categories, orders, tables, customers, billing details, and staff information.

The system provides essential features such as:

- Managing menu items and food categories
- Taking customer orders (dine-in, takeaway, or online)
- Handling table reservations and availability
- Generating computerized bills
- Updating inventory based on food usage
- Providing an admin panel for managing staff, menu, and reports

This project also involves designing the database using an ER diagram, creating relational tables, applying normalization principles, and writing SQL queries for efficient data handling. The integration of PHP with MySQL ensures secure storage, dynamic data manipulation, and smooth communication between the user interface and backend operations.

Overall, the Restaurant Management System demonstrates how web technologies and database management concepts can be combined to develop a reliable and efficient

platform. It highlights the role of HTML and CSS in building user interfaces, the use of PHP for backend logic and data processing, and the importance of MySQL in structured, scalable data storage—making it an ideal mini project for understanding full-stack web development and real-world database applications.

Major Features of the System

1. **Managing Menu Items and Food Categories**

This feature allows the admin to add, update, or remove menu items and categorize them (e.g., beverages, appetizers, main course, desserts). The system retrieves menu data from the database, allowing customers or staff to easily browse available food options. This eliminates the need for manually updating printed menus.

2. **Taking Customer Orders**

The system enables staff or customers to place dine-in, takeaway, or online orders. Once items are selected, the system captures order details such as item names, quantity, table number (if dine-in), and any special requests. PHP processes the order, stores it in the database, and marks it as "In Progress" or "Completed."

3. Automatic Inventory Updates

The system updates inventory levels automatically based on the food items prepared and sold. This ensures that stock availability is always up to date and helps the admin manage ingredients efficiently, preventing shortages or wastage.

CHAPTER 3

DIAGRAM

3. Diagrams

3.1 E-R Diagram

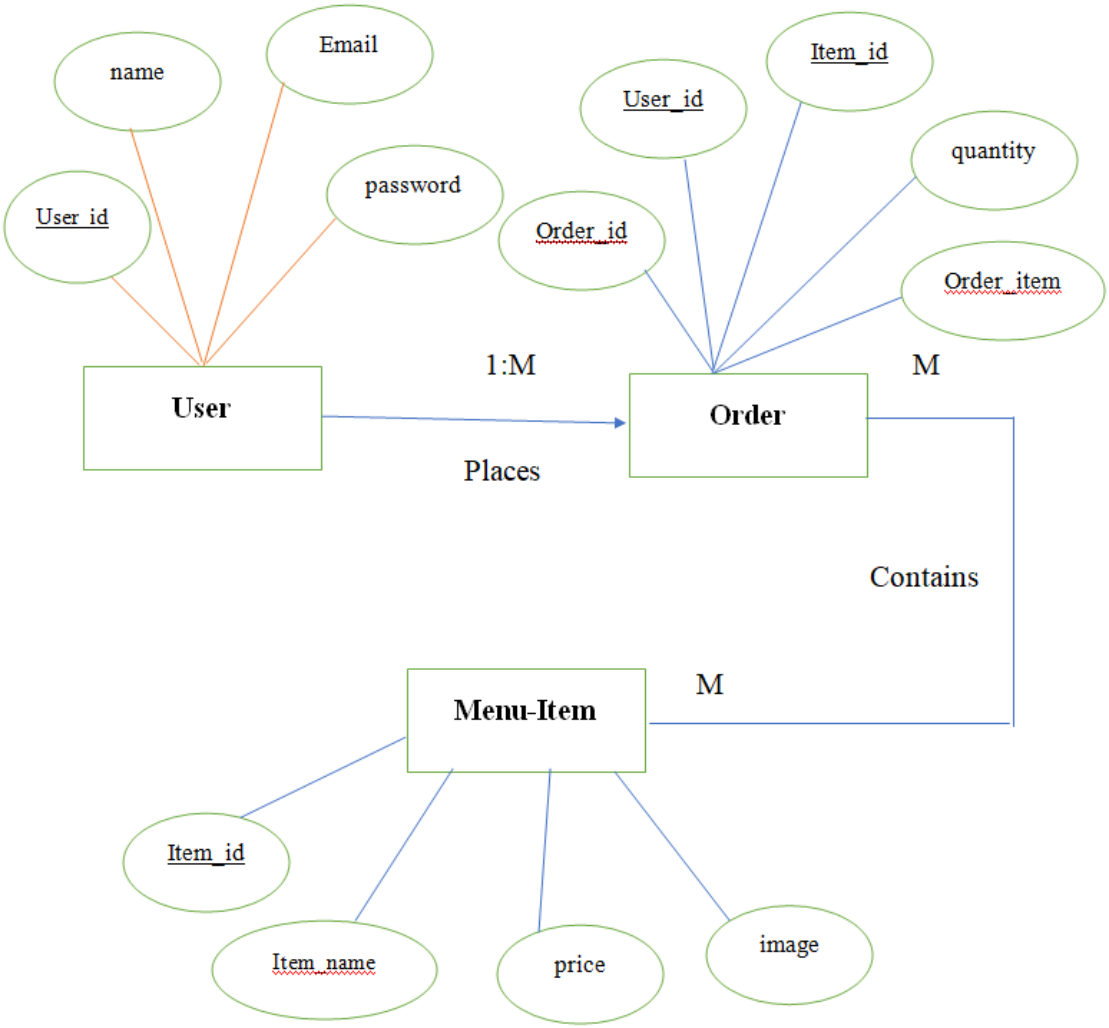


Fig 3.1: E-R Diagram

3.2 Class Diagram

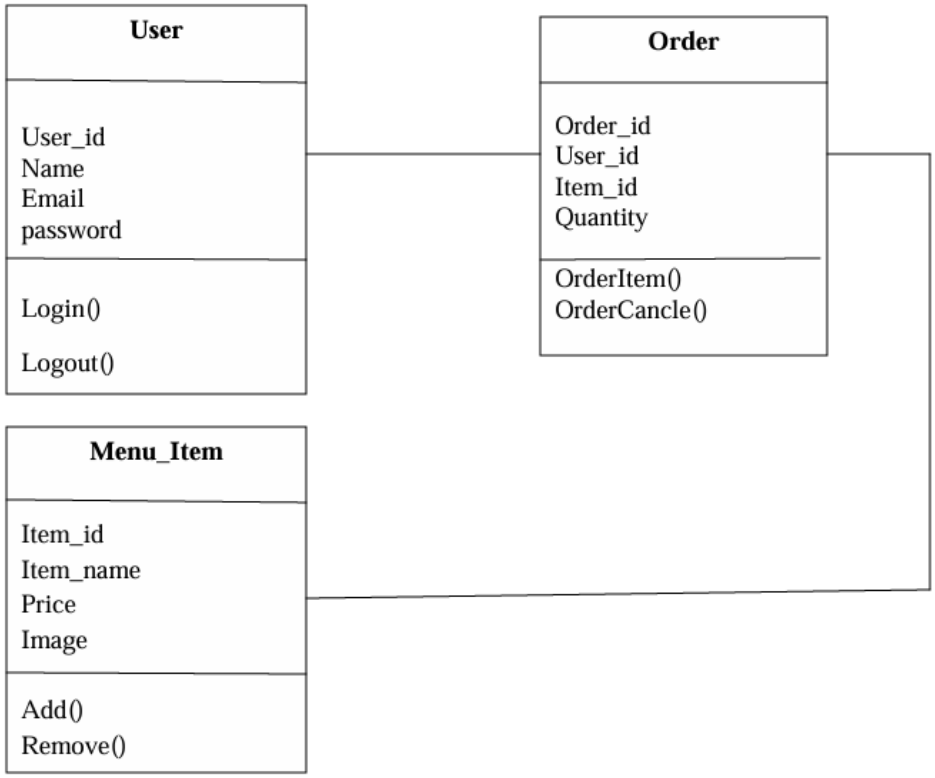
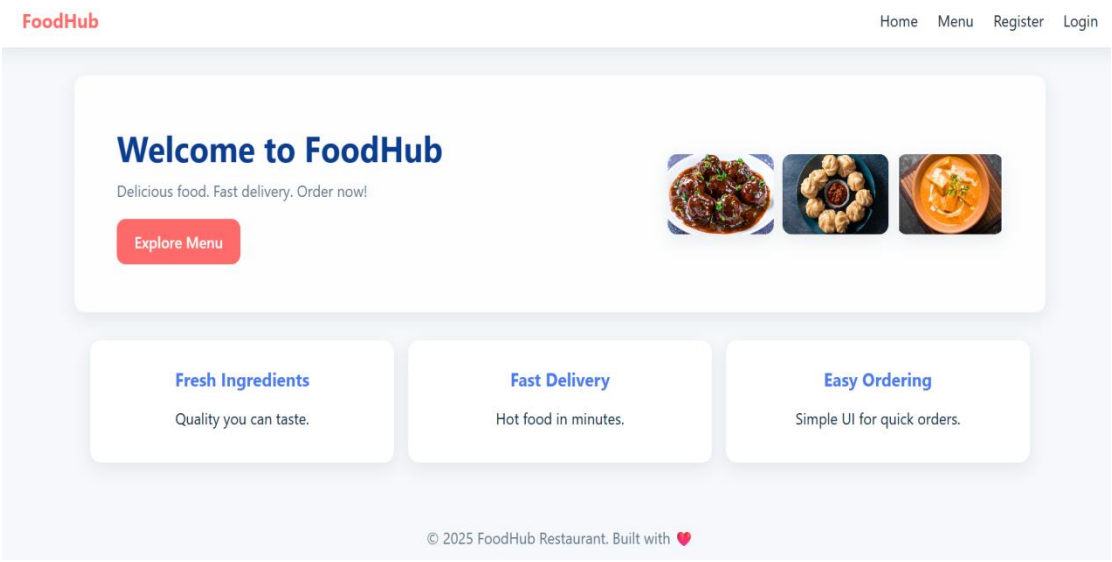


Fig 3.2: Class Diagram

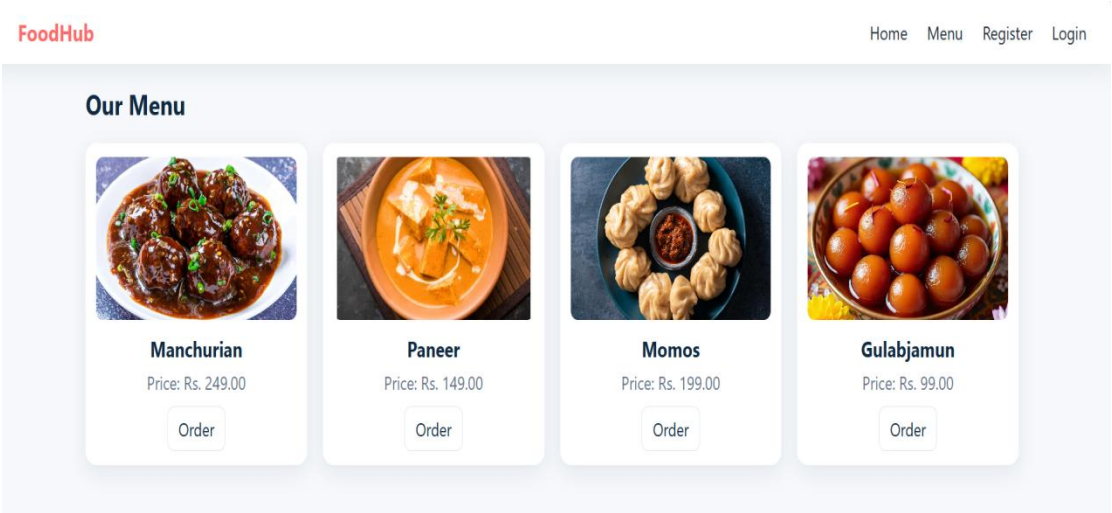
CHAPTER 4

IMPLEMENTATION

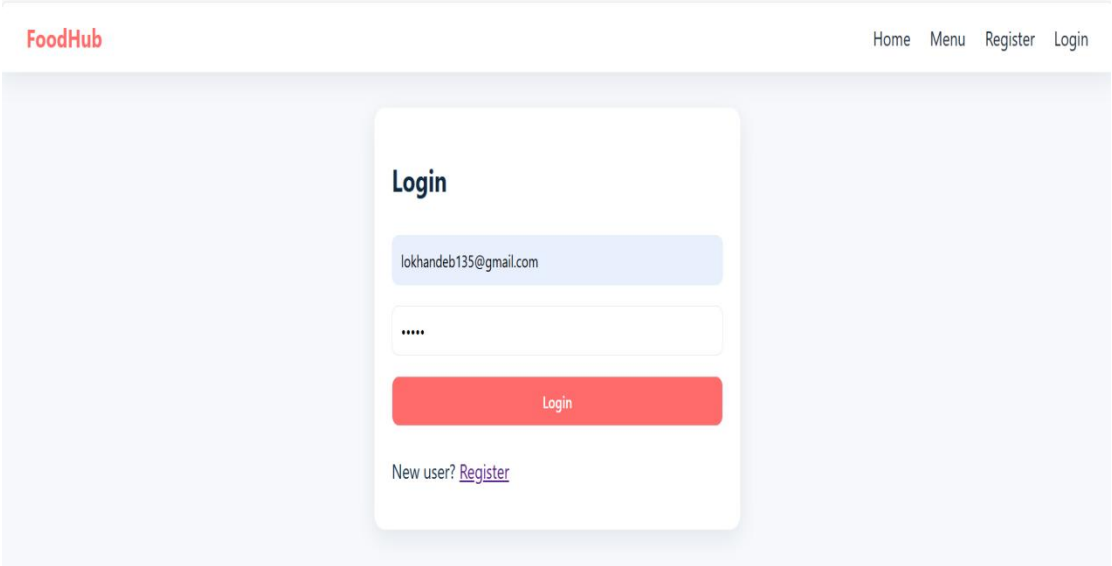
4.1 Home page



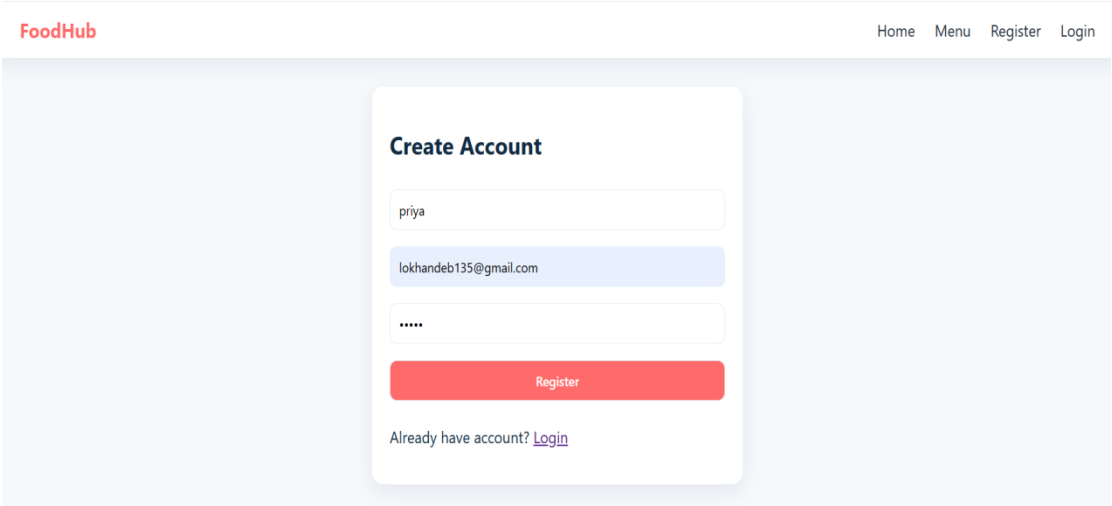
4.2 Menu Page



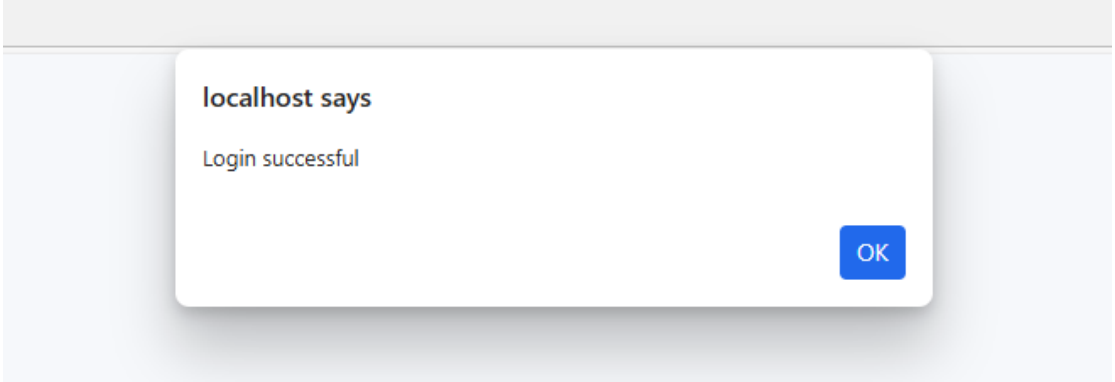
4.3 Login Page



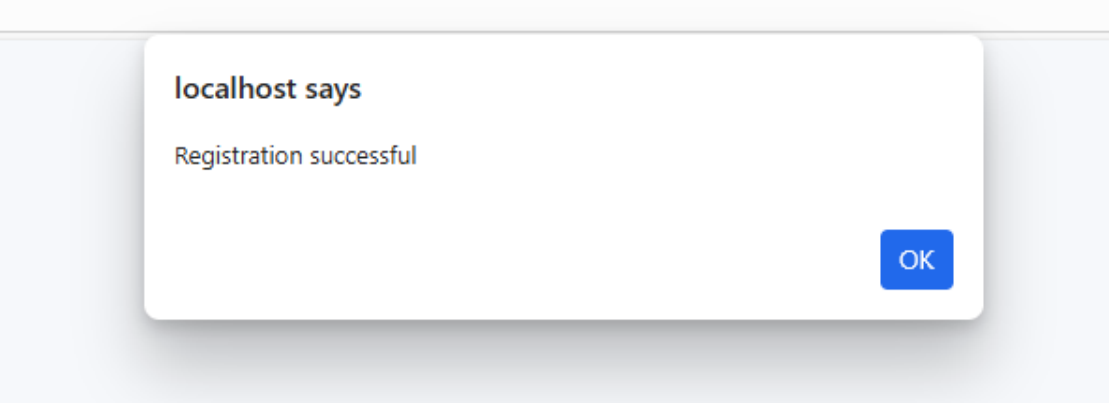
4.4 Registration Page



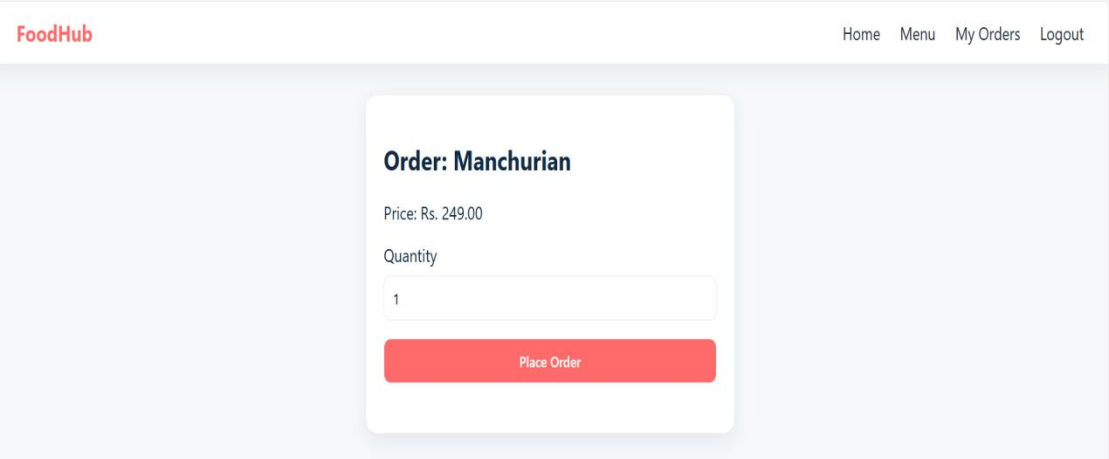
4.5 Login Successful



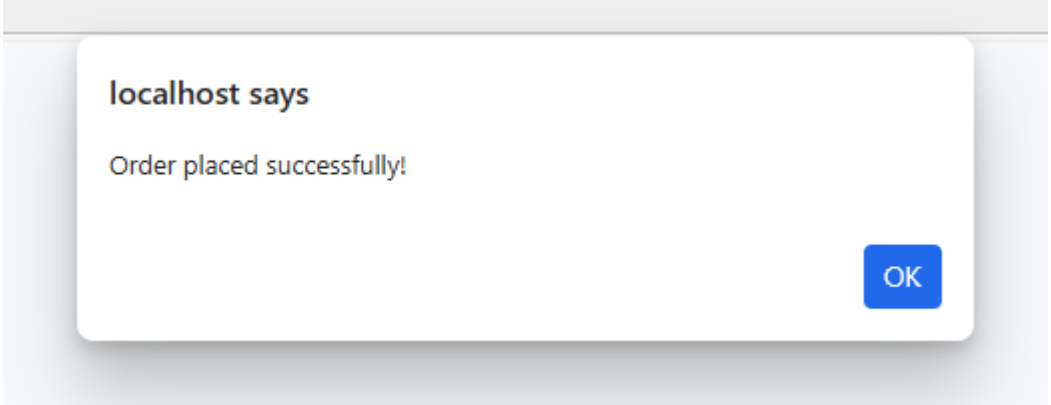
4.6 registration Successful



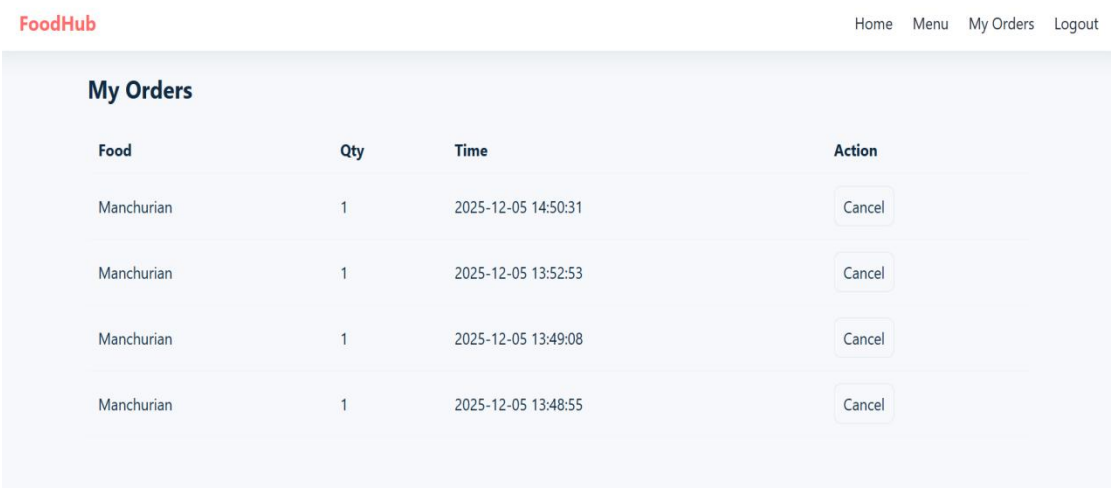
4.7 Placed Order



4.8 Order Successful



4.9 My Order



CONCLUSION

The Restaurant Management System successfully streamlines the core operations of a restaurant by providing an efficient and user-friendly digital platform. Through modules such as user authentication, menu management, online ordering, and order processing, the system enhances both customer convenience and administrative productivity. It reduces manual work, minimizes errors, and enables faster service delivery, resulting in an overall improved dining experience.

By integrating database-driven functionalities, the system ensures secure data storage, accurate record management, and real-time accessibility. The responsive interface and intuitive navigation make the application easy to use for customers as well as restaurant staff.

Overall, this project demonstrates how technology can modernize restaurant operations, increase efficiency, and support business growth. The system can be further expanded with features like online payment, inventory management, table booking, and analytics to create a more comprehensive restaurant management solution.