Government College University Faisalabad

(Chiniot Campus)

Food Order Pro

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Introduction

This project includes three basic programs: a Calculator for math functions, a Converter for unit conversions, and a BMI Tool for health calculations. They're designed to teach assembly language basics, like math operations and data handling. By working on these projects, improve problem-solving skills and understand how computers process data at a fundamental level. In simple terms, it's a versatile tool that not only solves math problems but also helps with everyday conversions and promotes awareness of personal health.

1.1 Purpose

The purpose of ***FoodOrderPro*** is to provide a seamless online food ordering platform that allows users to browse menus, place orders, and track deliveries in real-time. The platform benefits restaurants by offering an efficient order management system and enhances user experience with a responsive, easy-to-use interface.

1.2 Scope

FoodOrderPro streamlines the food ordering and delivery process by:

- Allowing customers to browse menus and place orders.
- Enabling restaurant owners to manage menus, track orders, and update statuses.
- Providing an admin panel to oversee all platform activities.
- Offering secure payment options and real-time tracking.

The system is designed to be scalable, ensuring future expansion to multiple cities and integrating more restaurants.

1.3 Definitions, Acronyms, and Abbreviations

- UI: User Interface
- UX: User Experience
- CRUD: Create, Read, Update, Delete
- SQL: Structured Query Language

1.4 References

- Web development resources: W3Schools, MDN Web Docs, FreeCodeCamp
- Google Maps API: For location-based features like map views
- Web.dev**:** Guides and tools for building modern websites.

2. Overall Description

2.1 Product Perspective

FoodOrderPro is a web-based application that facilitates online food ordering for customers and order management for restaurants. It operates as a multi-user platform supporting three user types: customers, restaurants, and administrators.

2.2 Product Features

2.2.1 User Features:

- Create and manage accounts
- Browse restaurant menus and filter items
- Add items to cart and place orders
- Real-time order tracking
- Payment options (cash/card)

2.2.2 Restaurant Features:

- Restaurant registration and login
- Manage menu items (add, update, delete)
- Receive and process orders
- Update order status (preparing, out for delivery, delivered)

2.2.3 Admin Features:

- Admin login page for secure access
- Dashboard to monitor restaurants and user activity
- Generate reports and manage platform users

2.3 User Classes and Characteristics

- **Customers:** General users ordering food
- **Restaurant Managers:** Manage menu and orders
- **Administrators:** Oversee and maintain platform functionality

2.4 Operating Environment

- **Frontend**: HTML, CSS, JavaScript
- **Backend**: PHP

- **Database**: MySQL
- **Tools**: Visual Studio Code, Git, Figma for UI Design

3. Requirements

3.1 Functional Requirements

- User registration and secure login/logout
- Admin login through a dedicated portal
- CRUD operations for food items and restaurant management
- Real-time notifications for order updates
- Search and filter functionality for users
- Order history for users and restaurants
- Secure payment integration

3.2 Non-Functional Requirements

- Performance: The platform should process 200+ simultaneous orders without downtime.
- Security: Data encryption and protection against SQL injection.
- Usability: Intuitive UI/UX design for all user classes.
- Scalability: Able to integrate new restaurants and features seamlessly.
- Availability: 99.9% uptime.

4. User Interface

4.1 System Architecture

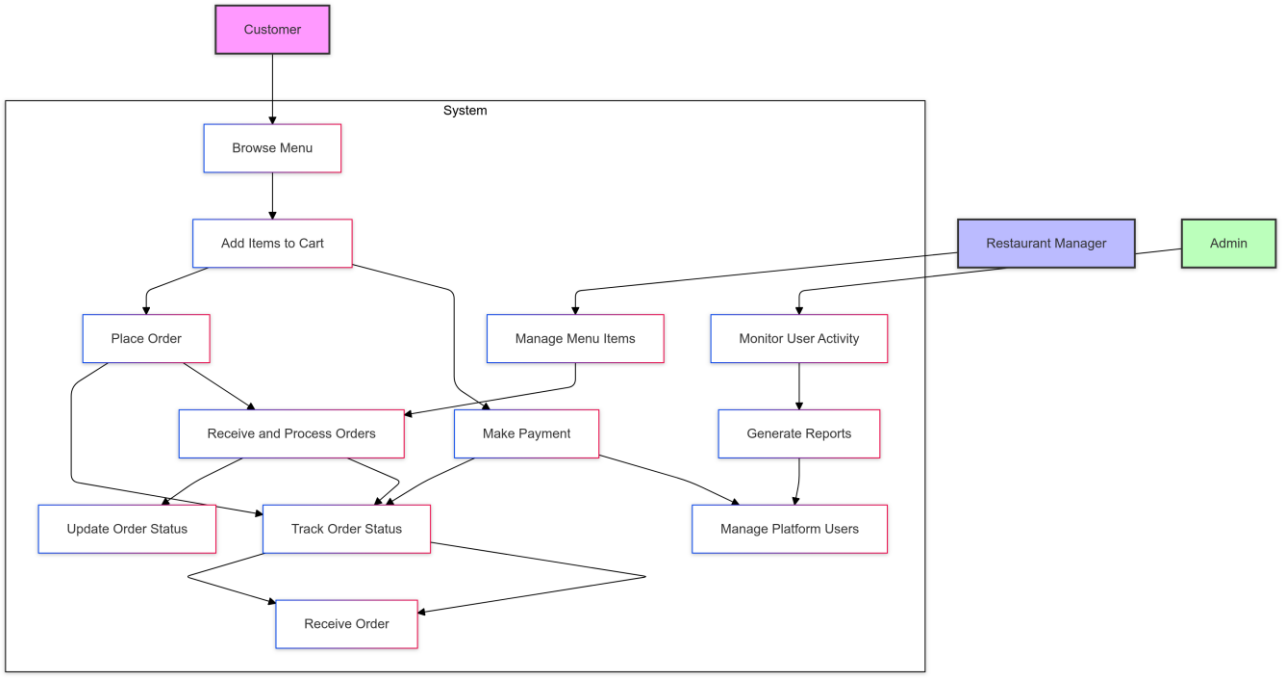
- Frontend: HTML,CSS,JS
- Backend: PHP
- Database: MySQL
- Authentication: JWT (JSON Web Tokens)

4.2 Database Design

- Users Table: UserID, Name, Email, Password, Role
- Restaurants Table: RestaurantID, Name, Location, Contact

- MenuItems Table: ItemID, RestaurantID, Name, Price, Category
- Orders Table: OrderID, UserID, RestaurantID, Total, Status

5. Use Case Diagram



6. Interface Design

6.1 User Interface

The following screenshots demonstrate key user interface components of FoodOrderPro, highlighting the core functionalities available to different user roles.

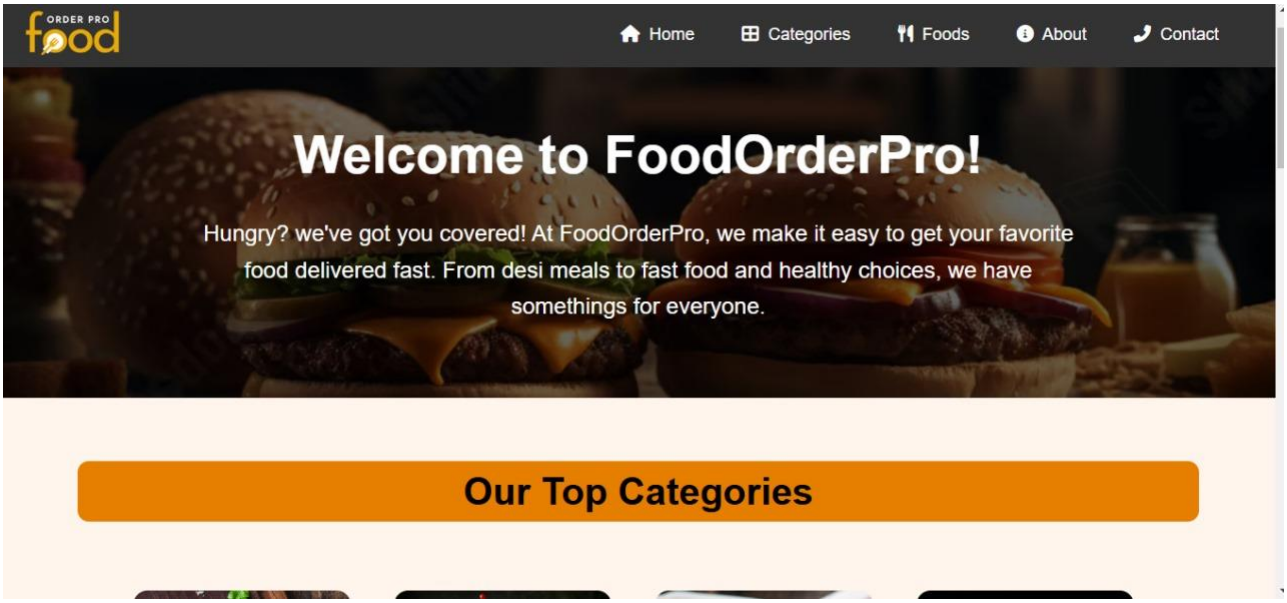


Figure 6.1: Home Page Interface

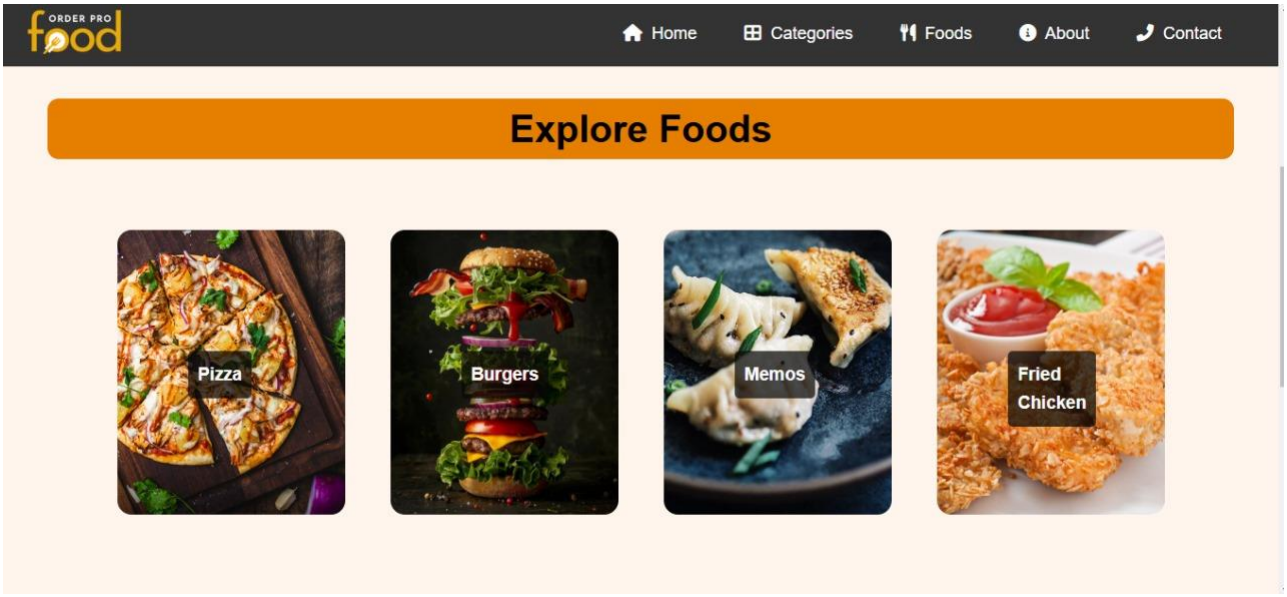


Figure 6.2: Home Page Interface

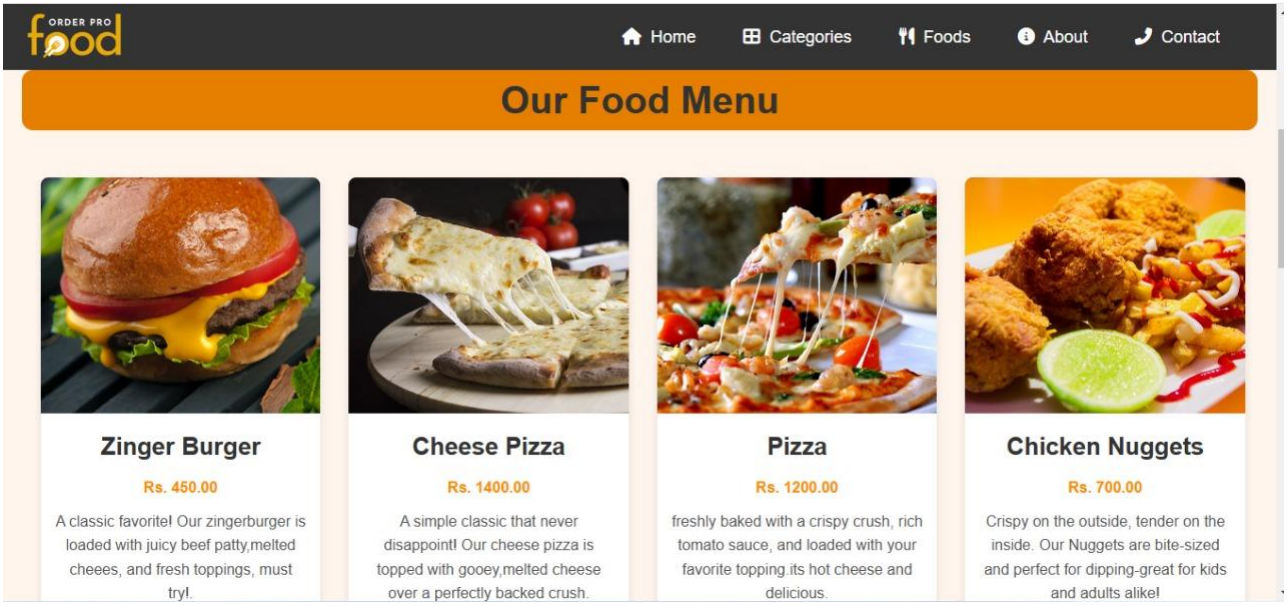


Figure 6.3: Food Menu Interface

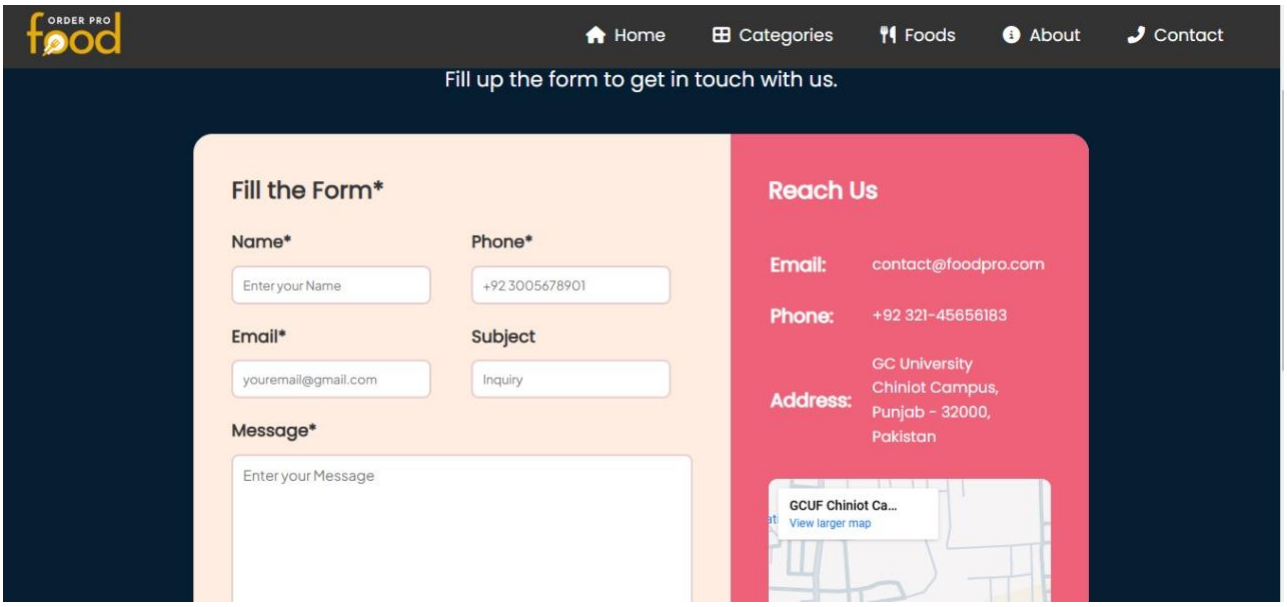


Figure 6.4: Contact Form Interface

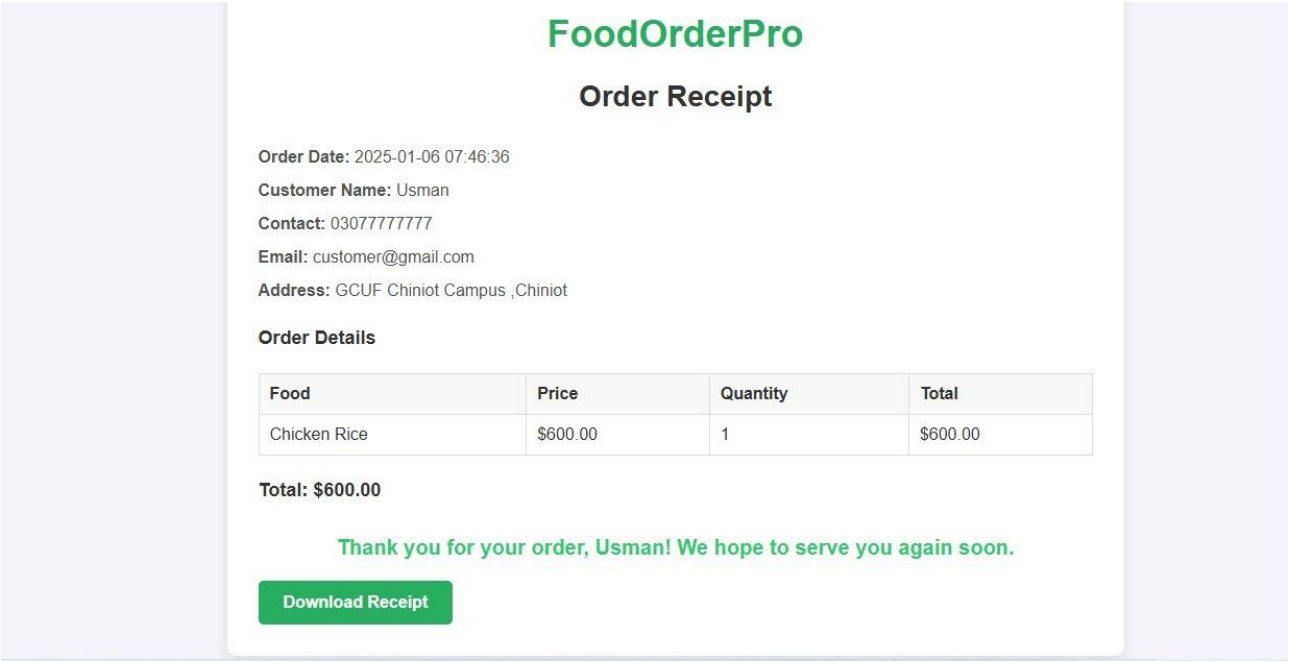


Figure 6.5: Order Receipt Interface

6.2 Admin Interface

The following screenshots demonstrate key user interface components of the FoodOrderPro **Admin Interface**, showcasing core functionalities such as order management, user administration, and analytics tailored for the admin role.

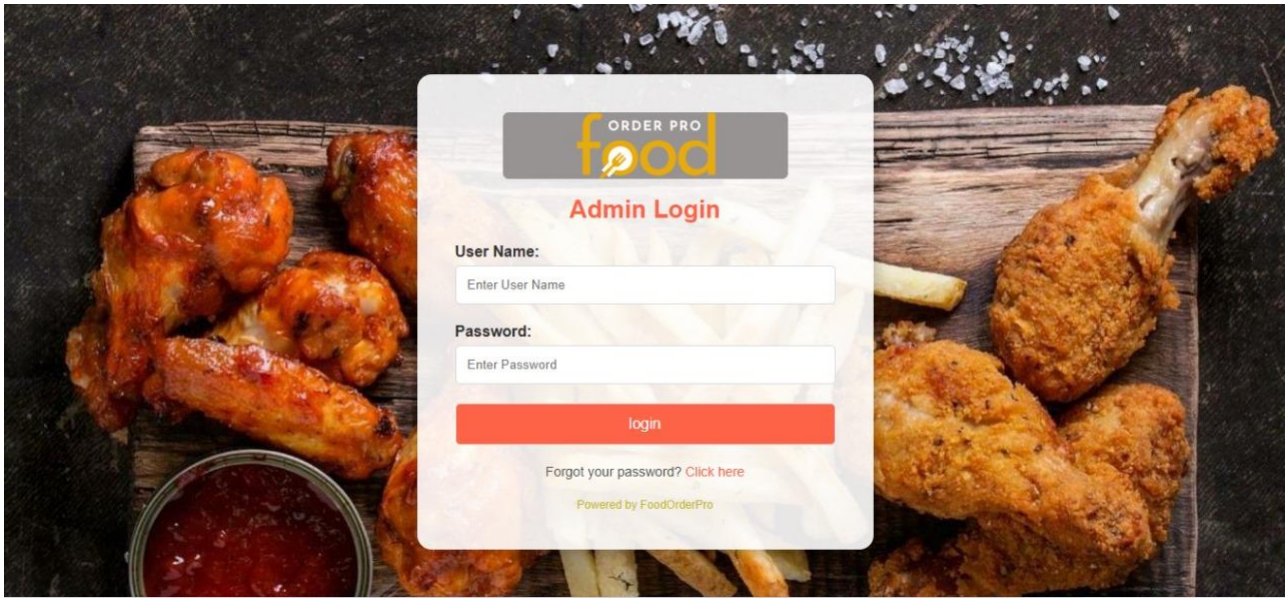


Figure 7.1: Admin Login Interface

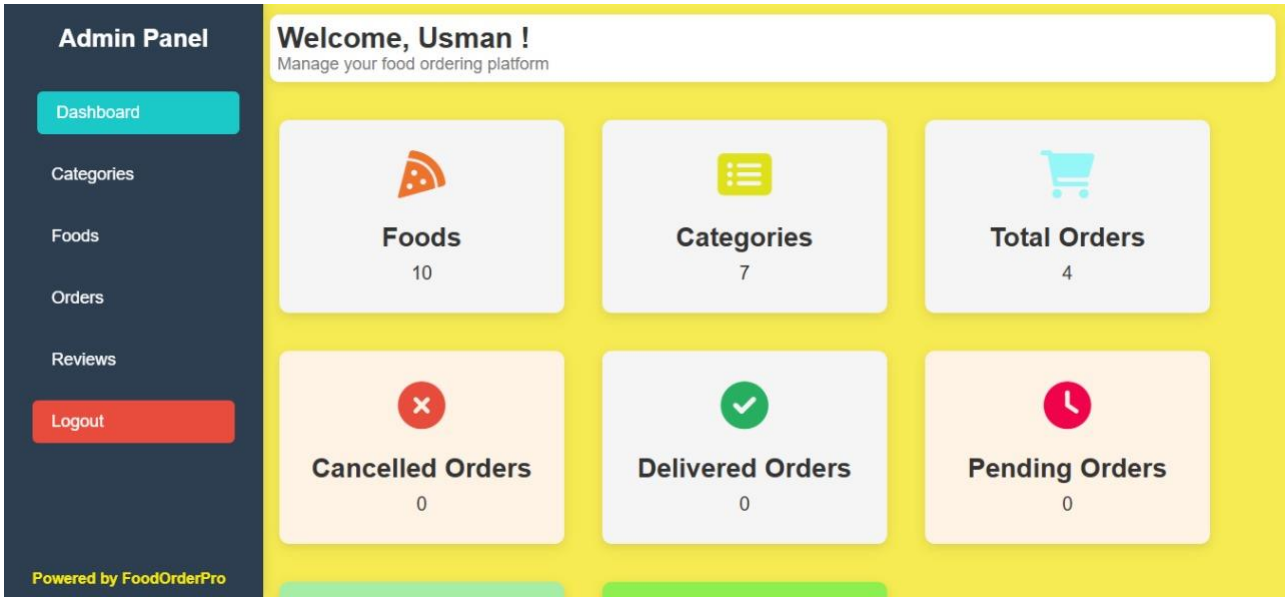


Figure 7.2: Admin Dashboard

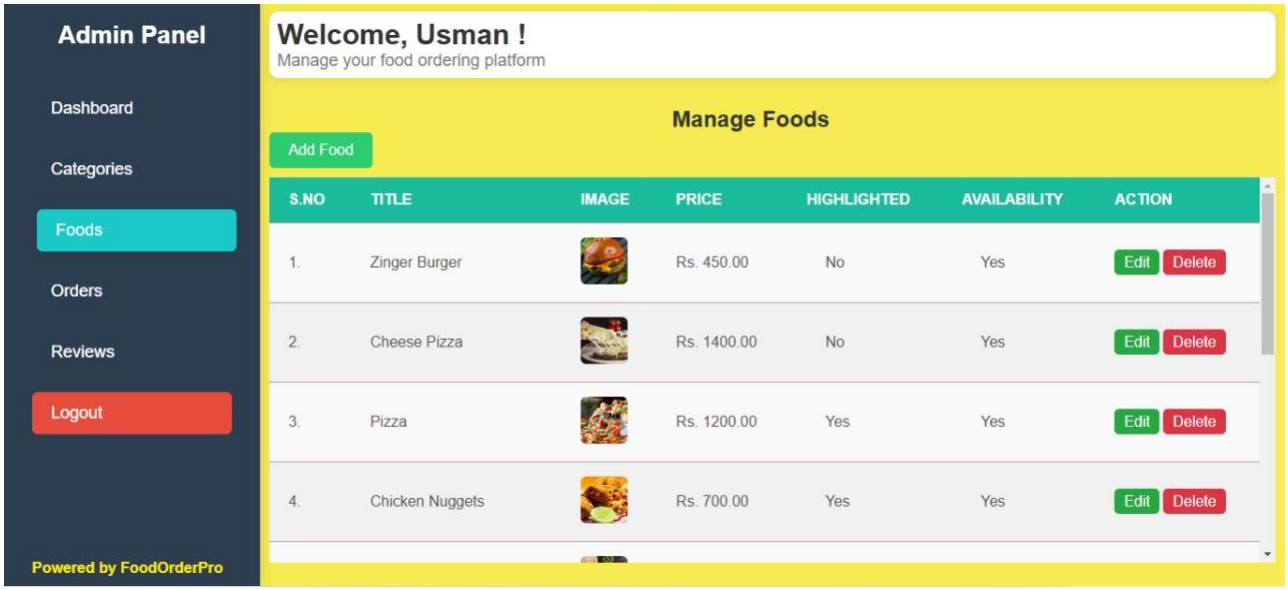


Figure 7.3: Food Management Dashboard

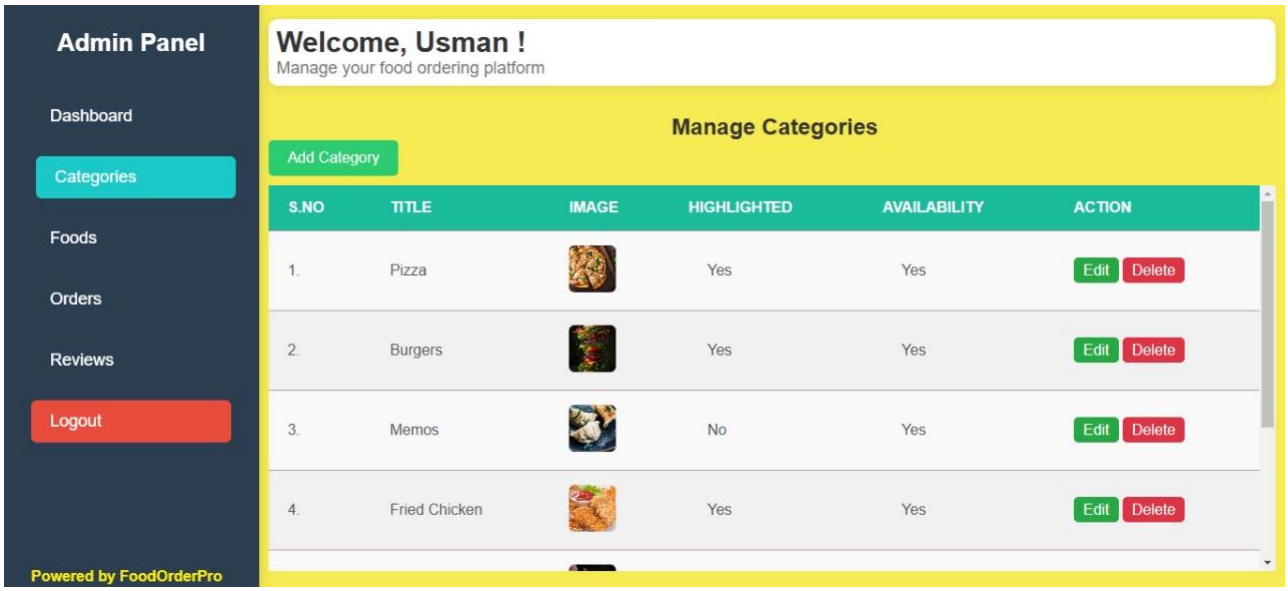


Figure 7.4: Categories Management Dashboard

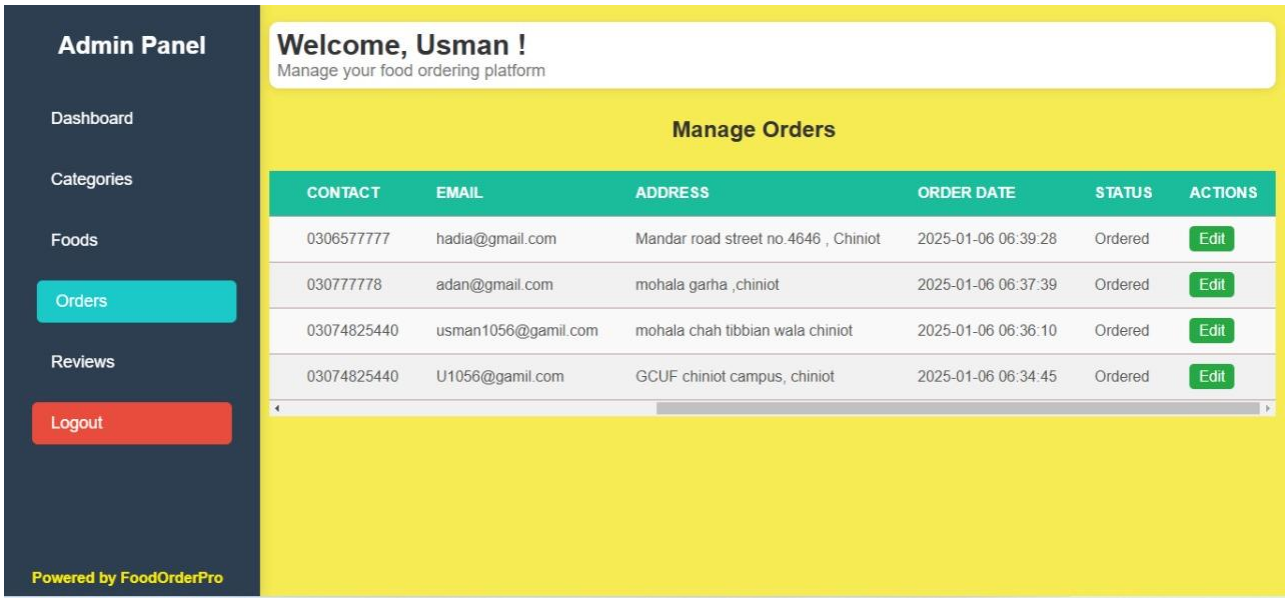


Figure 7.3: Orders Management Dashboard

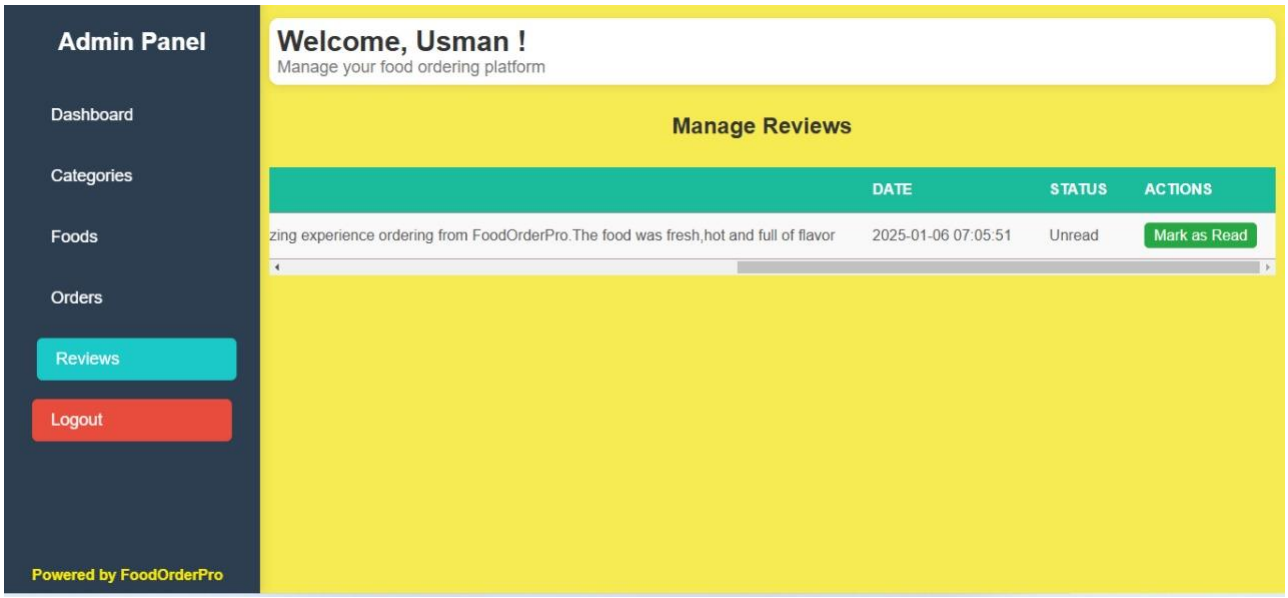


Figure 7.3: Reviews Management Dashboard

7. Testing

During the testing phase of the Food Order Pro project, unit testing was conducted to ensure individual components, such as user authentication and order placement, functioned correctly. Integration testing verified seamless communication between the frontend and backend through APIs, ensuring data accuracy and functionality. End-to-end testing simulated real-world scenarios, validating the user experience from order selection to payment.

8. Project Constraints

- Limited development time (one semester).
- Resource constraints (team of 3 members).
- Budget limitations for hosting and APIs.

9. Conclusion

FoodOrderPro successfully meets the requirements outlined at the beginning of the project. The system is functional, scalable, and provides an optimized solution for food ordering and restaurant management. It demonstrates the practical application of web technologies and offers a real-world solution to streamline food delivery services.