Ahsanullah University of Science and Technology
Department of Computer Science and Engineering

CSE 3200: Software Development-V

Fall 2023

PROJECT REPORT

Cloud Restaurant

Lab Group: A1
Project Group: 04

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22 September , 2024

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1 Introduction

The "Cloud Restaurant" project has been developed using Visual Studio with C# and ASP.NET, aims to transform the dining experience with an advanced online food ordering system. This platform will help restaurants easily manage and grow their online presence, allowing customers to order meals from home. Designed with user-friendly interfaces, strong backend systems, and secure payment options, Cloud Restaurant will provide reliable service for both customers and restaurant staff. Key features will include user registration, profile management, detailed menu listings, order placement and customization, secure payment processing, and a feedback system. Restaurant administrators will be able to manage the platform, handle user accounts, and respond to customer feedback. Real-time data analytics will help businesses improve operations, boost customer satisfaction, and increase revenue, meeting the growing demand for convenient meal solutions.

1.1 Objective

The objective of the "Cloud Restaurant" project is to create a seamless online food ordering system that enhances both customer order experiences and restaurant operations. By streamlining order placement, improving accuracy, and fostering customer engagement, the project aims to benefit urban populations, restaurant staff, customers seeking convenience, and restaurant administrators, ultimately elevating the overall food ordering experience for all stakeholders.

1. What our project will do: The "Cloud Restaurant" project will develop a sophisticated online food ordering system designed to enhance the food ordering experience for customers and streamline operations for restaurant staff. Key functionalities of the project include:

- **User Registration and Authentication**: Allow new users to create accounts and existing users to securely log in.
- **Profile Management**: Enable users to update their personal information, preferences, and payment details.
- **Detailed Menu Listings**: Provide comprehensive menus with descriptions, prices, and customization options.
- **Order Placement and Customization**: Facilitate easy ordering and allow customers to customize their meals according to their preferences.
- **Secure Payment Processing**: Ensure safe and secure transactions through various payment methods.
- **Feedback System**: Collect customer reviews and feedback to improve service quality.
- **Admin Management**: Allow restaurant administrators to manage menu items, oversee user accounts, and respond to customer inquiries.

2. What problems may be addressed through this project:
The "Cloud Restaurant" project aims to solve several issues faced by both customers and restaurant operators:

- **Inefficient Ordering Processes**: The platform simplifies the food ordering process, reducing wait times and enhancing the overall customer experience.
- **Order Inaccuracies**: By allowing customers to input their orders directly, the system minimizes errors that often occur with traditional phone orders.
- **Limited Customer Engagement**: The system includes features like personalized profiles and feedback options to increase customer interaction and satisfaction.
- **Operational Challenges**: The project streamlines administrative tasks, allowing restaurant staff to efficiently manage orders, menus, and customer inquiries.
- **Lack of Data Insights**: Real-time data analytics provide valuable insights into customer preferences and operational performance, helping restaurants make informed decisions.

3. Which form of human life will be influenced by your project:
The "Cloud Restaurant" project will significantly impact the following groups:

- **Urban Populations**: Busy professionals and families in urban areas will benefit from the convenience of ordering meals online, saving time and effort.
- **Restaurant Staff**: The platform will simplify the workflow for restaurant staff, reducing manual errors and increasing efficiency in order management and customer service.
- **Customers Seeking Convenience**: Individuals who prefer the ease of online transactions and home delivery will find the system particularly beneficial.
- **Restaurant Administrators**: Managers and owners will be able to better oversee their operations, manage resources, and improve customer satisfaction through efficient use of the platform.

By addressing these aspects, the "Cloud Restaurant" project aims to create a seamless and efficient dining experience, ultimately enhancing the quality of life for both customers and restaurant personnel.

1.2 Motivation

The motivation behind the "Cloud Restaurant" project comes from personal experiences and observations of the challenges faced by both customers and restaurant operators in the traditional food ordering process. As frequent patrons of various dining establishments, we often encountered inefficiencies such as long wait times, order inaccuracies, and limited engagement opportunities. Furthermore, conversations with restaurant owners and staff revealed the operational hurdles they encounter, including manual order management, difficulty in gathering customer feedback, and the lack of real-time insights into their business performance. Driven by these firsthand experiences and a desire to address these pain points, we embarked on the "Cloud Restaurant" project. Our aim is not only to provide a solution to these challenges but also to enhance the overall dining experience for everyone involved. By leveraging technology to streamline order processes, improve accuracy, and foster customer engagement, we envision a future where dining out becomes more convenient, efficient, and enjoyable for both customers and restaurant personnel alike.

2 UI screenshots of our project

Admin Panel

Admin Login: Restaurant administrators can securely log in using their unique credentials to access the admin panel.

Menu Management: Admins can add, update, and delete menu items, including descriptions, prices, and available options.

Order Management: Admins can view and manage incoming orders, mark them as processed, and track order statuses.

Customer Management: Admins can view and manage customer information, including contact details, order history, and preferences.

Feedback Management: Admins can view and respond to customer feedback and reviews to improve customer satisfaction.

Inventory Management: Admins can track inventory levels, receive alerts for low stock, and manage supplier information for restocking.

Selling Report: Admins can track total sales reports from a specific date range.

User Panel

User Registration and Login: Customers can create accounts or log in securely to access personalized features.

Menu Browsing and Ordering: Customers can browse the menu, select items, customize orders, and place them for delivery or pickup.

Account Management: Customers can update their profiles, manage delivery addresses, and view order history for easy reordering.

User-Friendly Interface: A user-friendly interface ensures ease of use.

Cart: Customers can manage orders through the cart.

Payment Options: Customers can choose from various payment methods, including credit/debit cards, digital wallets, and cash on delivery.

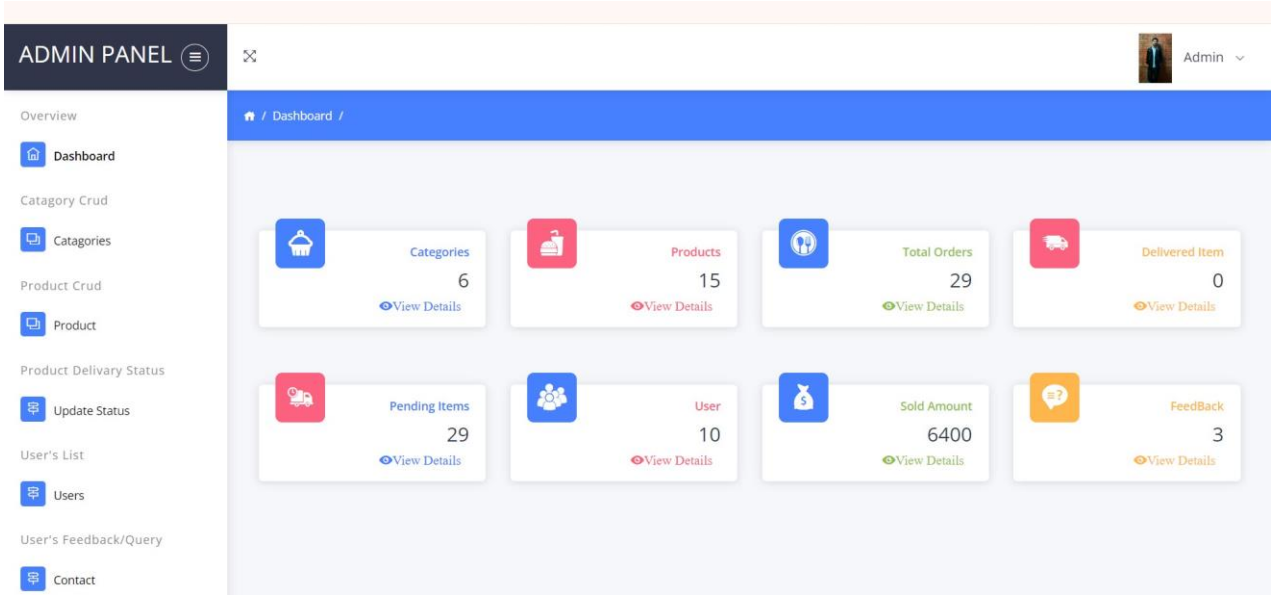

Figure 1: Admin Panel Interface

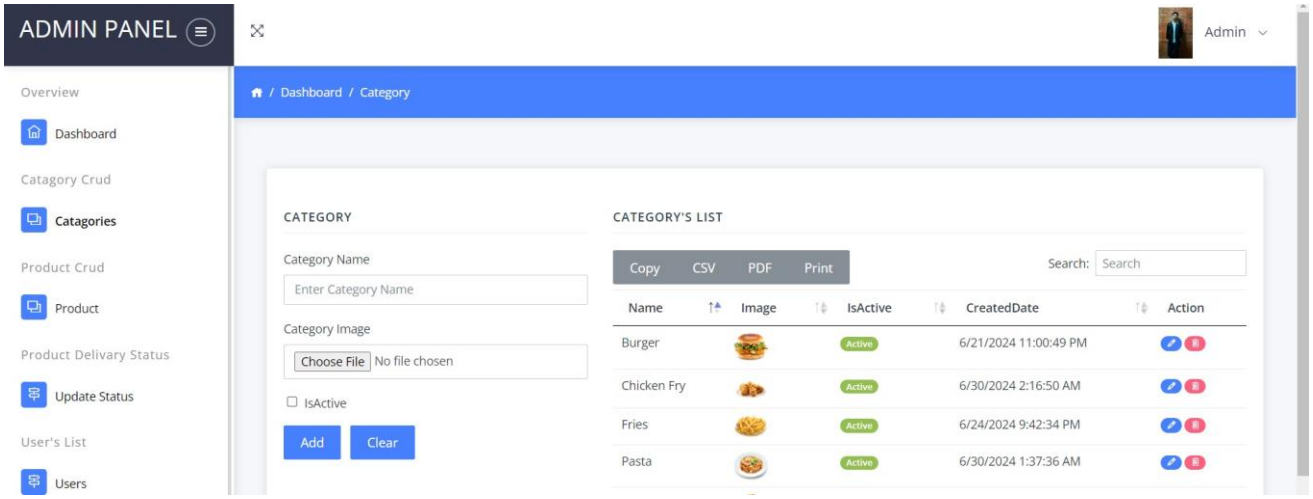

Figure 2: Menu Management Interface

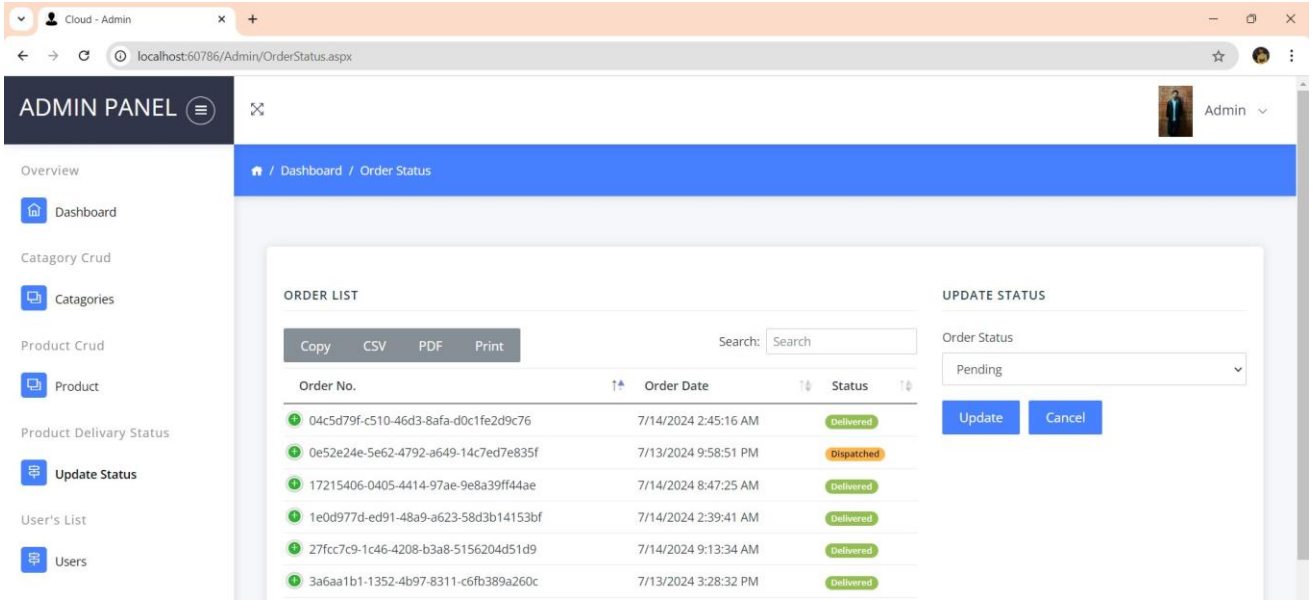

Figure 3: Order Management Interface

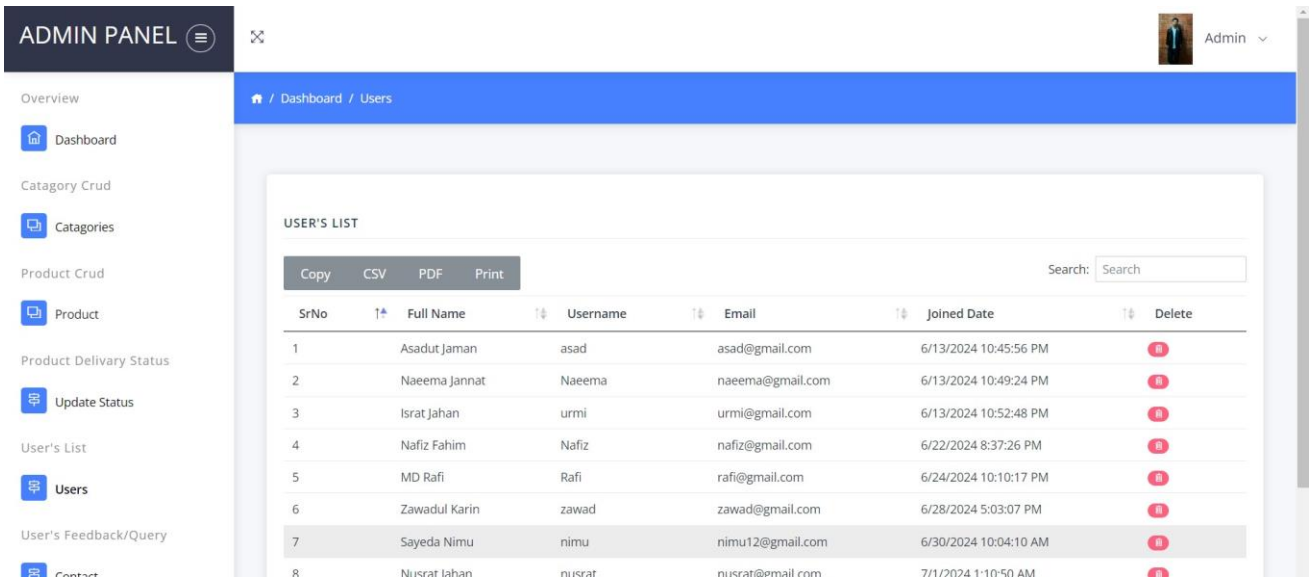

Figure 4: Customer Management Interface

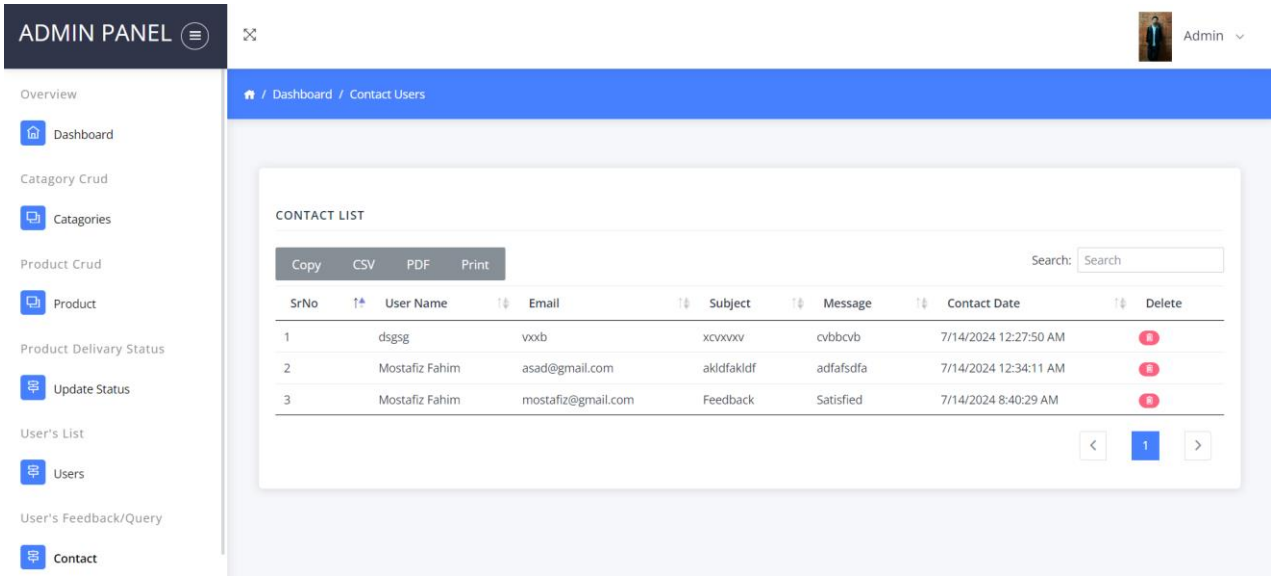

Figure 5: Feedback Management Interface

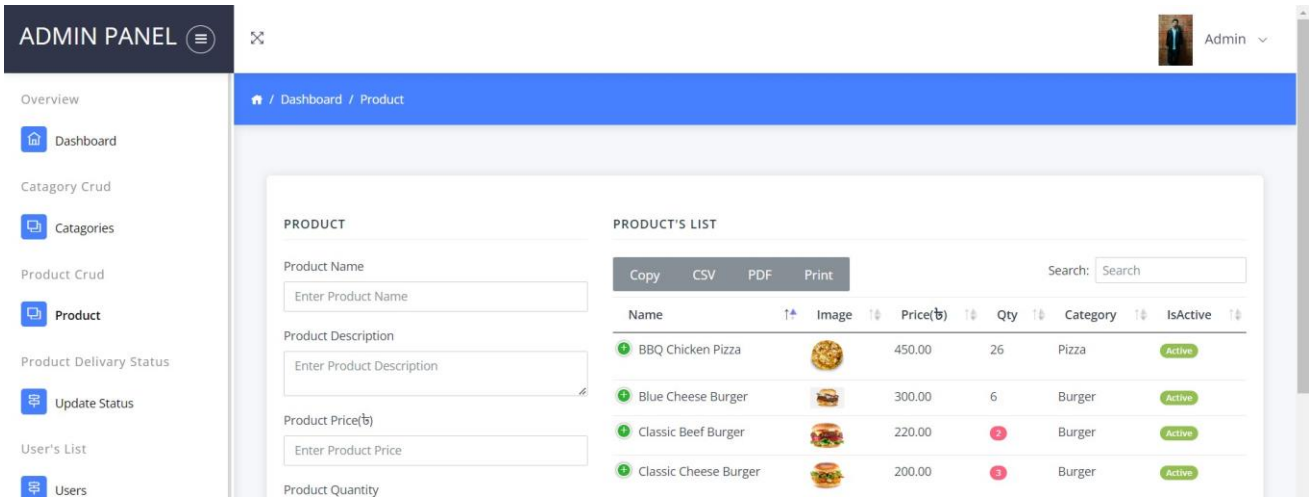

Figure 6: Inventory Management Interface

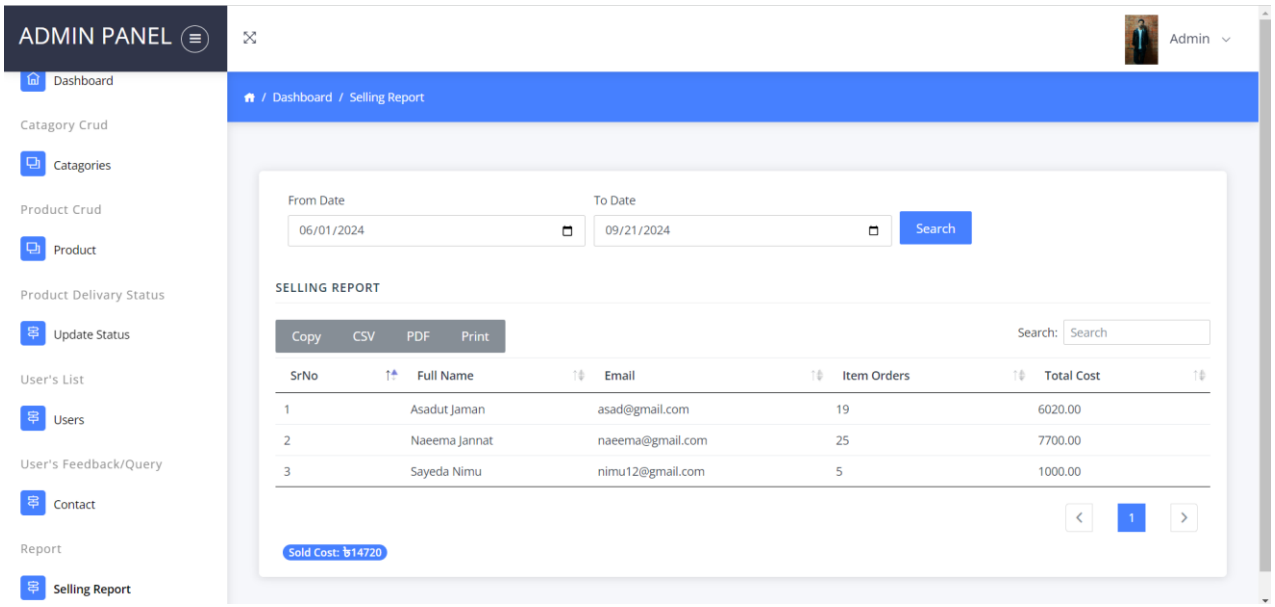

Figure 7: Selling Report Interface

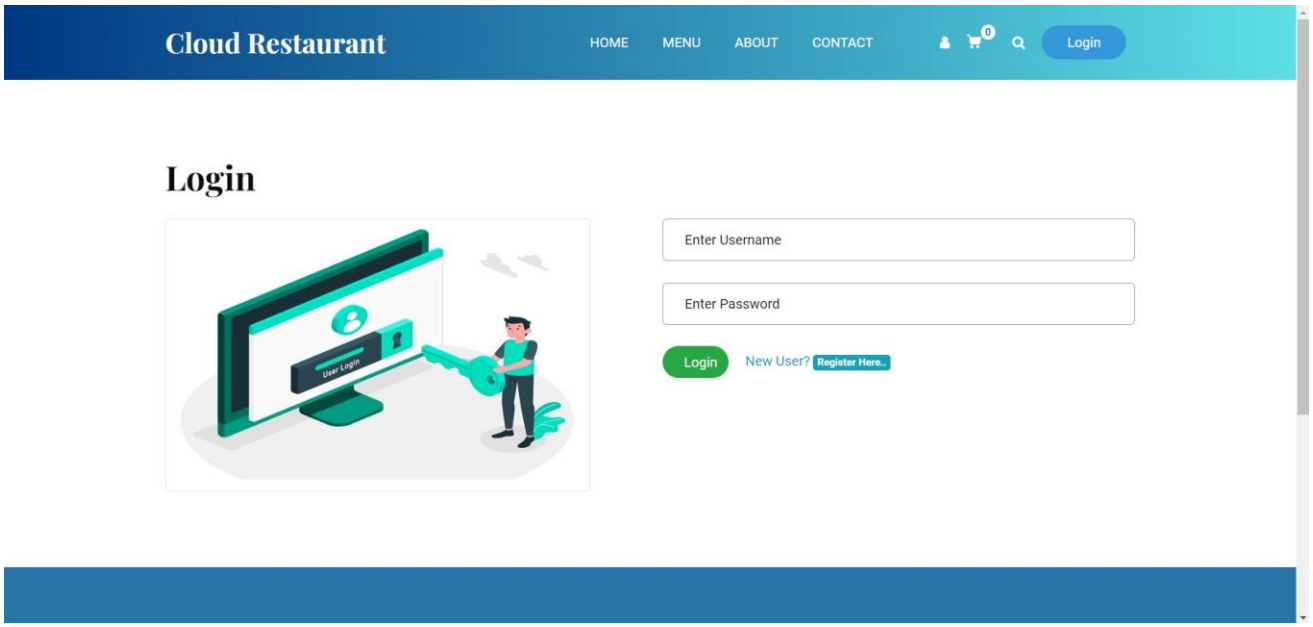

Figure 8: Login Interface

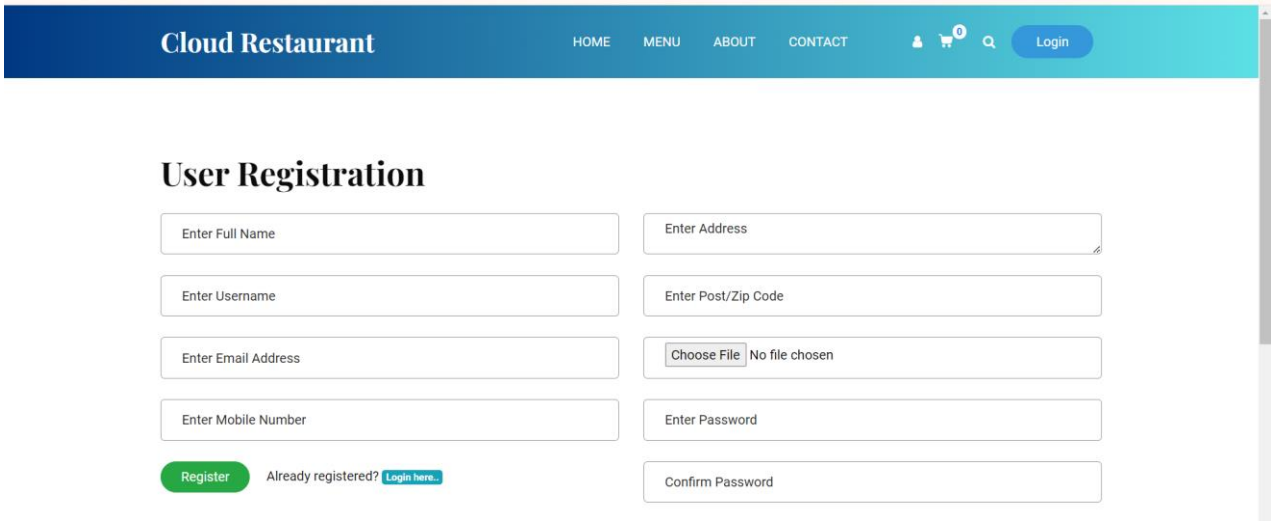

Figure 9: Registration Interface

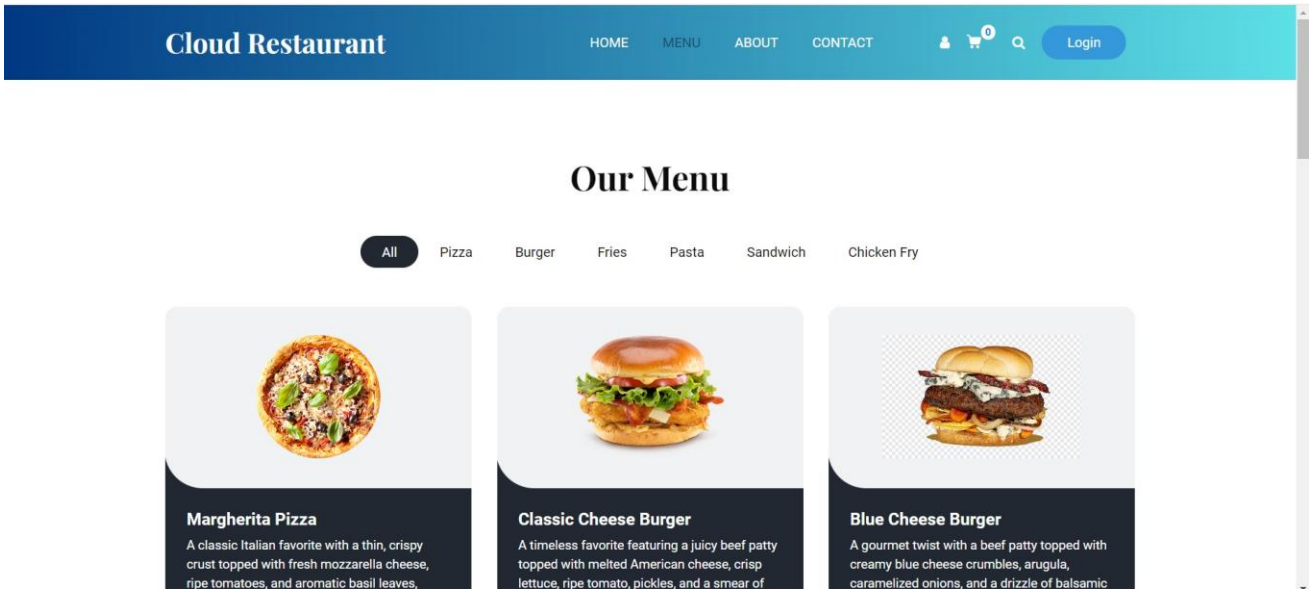

Figure 10: Menu Interface

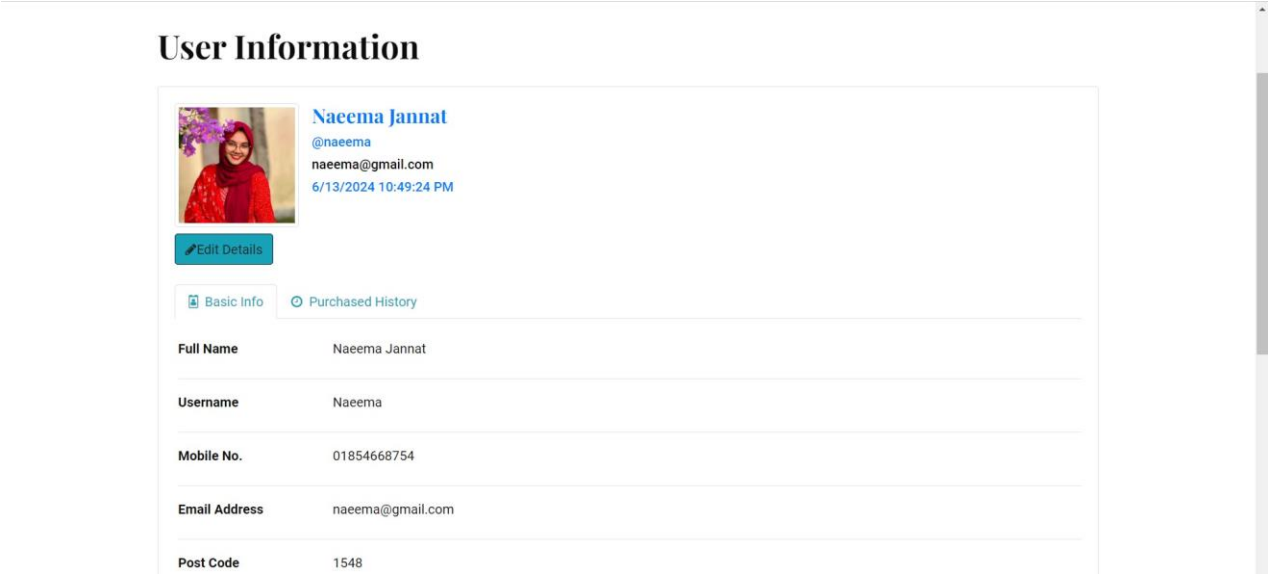

Figure 11: Profile Interface

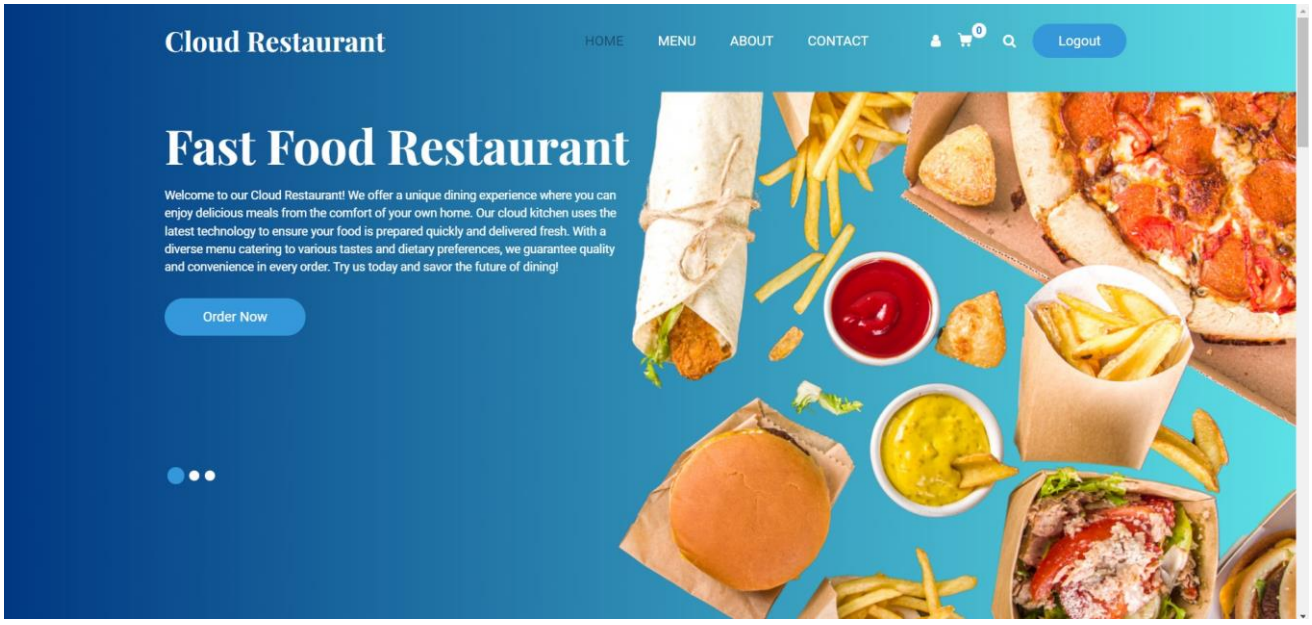

Figure 12: User Interface

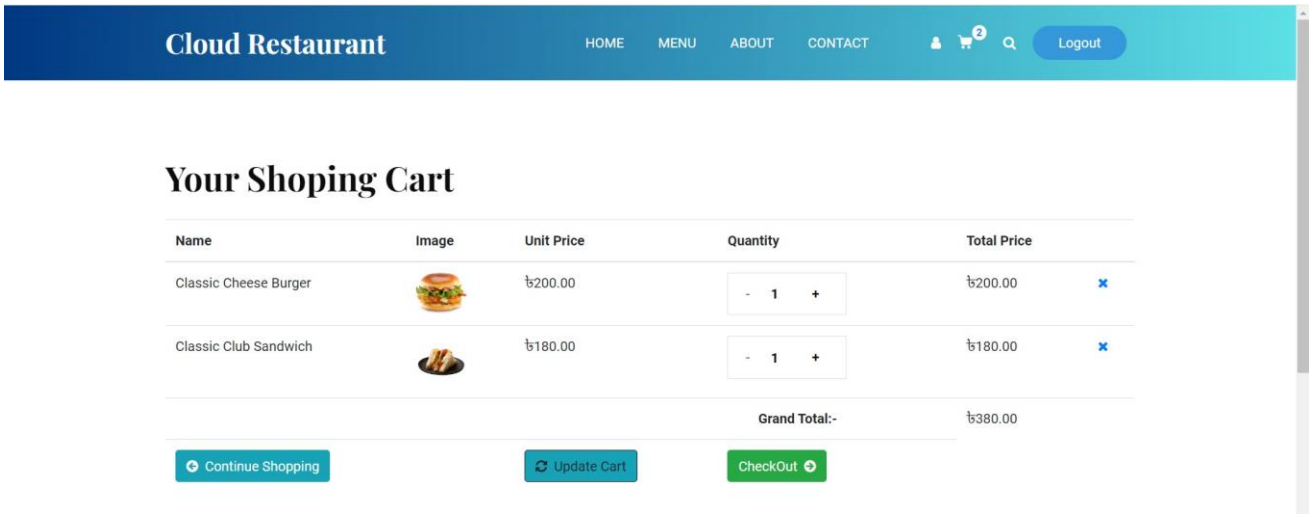

Figure 13: Cart Interface

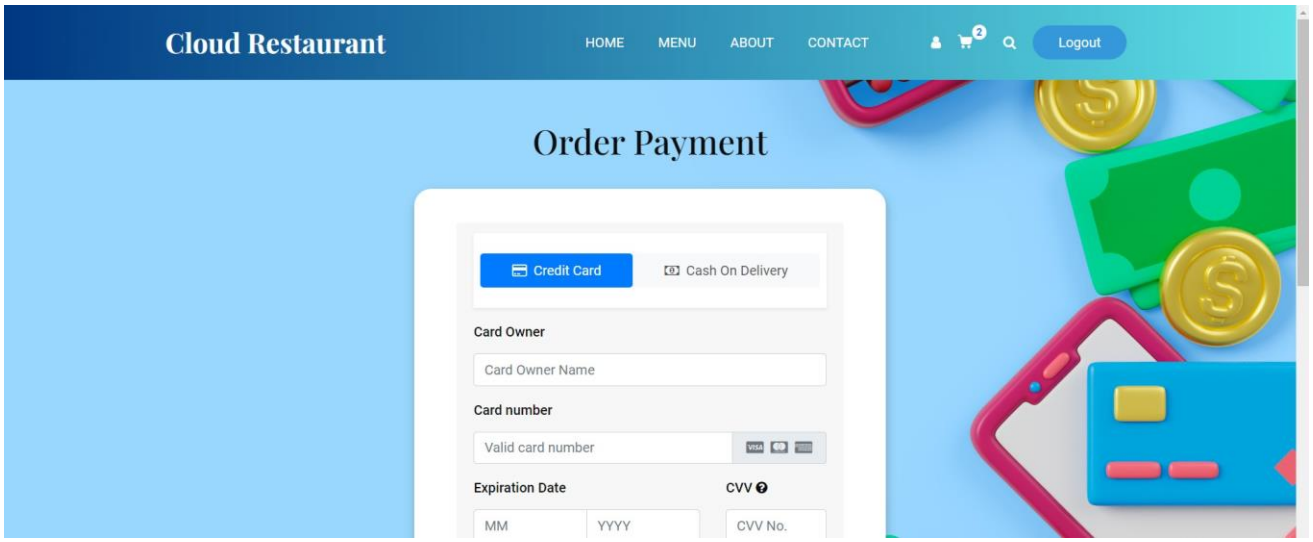

Figure 14: Payment Interface

Figure 15: Entity Relationship Diagram

Conclusion:

The Cloud Restaurant System streamlines food ordering by providing a user-friendly interface for customers to place orders seamlessly, efficient order management tools for administrators to track and handle incoming orders, and easy status updates for delivery personnel to ensure timely deliveries. Through its intuitive design and robust functionality, the system enhances the overall dining experience by fostering smooth communication and coordination between stakeholders, ultimately leading to heightened satisfaction for all involved parties.