Software Requirements Specification

for

Amber Shoes – E commerce site

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UNDER THE GUIDENCE OF

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Revision History

Name	Date	Reason For Changes	Version
Figma Design	1/02/25	Created Figma design, wire frames and finalize UI design	
Created Main Form and Dashboard Form	5/05/25	Creating Main class that includes some common code and created Home.aspx as Main form of project as it is the entry point of the project and created Dashboard.aspx which is first form to for admin side.	1.0
DB Design and Creation	10/02/25	Identify the required fields and tables to create a project and created a database.	1.0
Design Implementation	15/02/25	Implemented design and wireframe created into Figma on windows form and build forms.	1.0
Admin part Creation	01/03/25	Created complete admin part and created pages like user, admins, vehicels, products, categories etc.	1.0
Orders and User section created	25/03/25	Created pages for orders, and vehicle orders, designed cards to show orders.	
Payment gateway implementations	27/03/25	Implement razor pay payment gateway for online payments and test using all necessary test cases	1.0
Created Vehicle details and weather page	30/03/25	Created pages for checking weather which fetch live weather data from openWeatherMap API And created vehicle orders page from where user can rent a vehicle.	1.0

Final Testing and modification	11/04/25	Done final testing and implement some of the forms to make more efficient project and modified billing and order page also.	1.0

1. Introduction

1.1 Purpose

This document outlines the Software Requirements Specification (SRS) for the **Shoe Shop Management System**, developed using ASP.NET.
The purpose of this system is to provide a centralized digital platform tailored to manage footwear inventory, customer orders, and streamline shop operations. The platform facilitates key functionalities such as product management, order tracking, customer registration, and secure admin control.

This project aims to eliminate manual inefficiencies, enhance accuracy in stock handling, improve customer service, and optimize the overall retail process for shoe businesses.

By automating essential workflows—such as product uploads, stock updates, order processing, and user authentication—the **Shoe Shop Management System** offers administrators and users greater control, visibility, and accessibility within a modern e-commerce experience.

1.2 Document Conventions

This document follows specific formatting rules to maintain consistency and improve readability throughout the specification:

- **Bold:** Used for highlighting key terms, feature names, and requirements.
- *Italics:* Used to denote glossary terms or emphasize newly introduced concepts.
- Code blocks: Used for any configuration, commands, or code snippets.
- **Underlined text:** Emphasizes critical points or high-priority requirements.
- Bulleted and numbered lists: Provide clarity for sequential or related item

1.3 Intended Audience and Reading Suggestions

This **SRS** is intended for the following individuals and groups involved in the development and deployment of the **Shoe Shop Management System**:

- **Developers & System Architects:** Focus on Sections 3 and 4, which define system features, architecture, and technical requirements.
- **Project Managers & Stakeholders:** Refer to Sections 1 and 2 to understand the system's goals, target users, and business needs.
- **Retail Management / Shop Owners:** Review the Introduction, Product Features, and User Roles to understand how the system supports everyday shoe retail operations.
- **Testers & Quality Assurance Teams:** Should consult both the functional and non-functional requirements for creating effective test cases and validation checks.

1.4 Project Scope

The **Shoe Shop Management System** is designed to function as a comprehensive and centralized platform tailored for managing footwear inventory, customer interaction, and order fulfilment. The primary features and goals include:

- **Product Management:** Admins can create main categories (e.g., Men, Women, Kids) and subcategories (e.g., Sneakers, Sandals, Formal), allowing products to be added with relevant sizes, prices, and stock levels.
- **Customer Order Management:** Registered users can browse shoes, add items to cart, and place orders. The admin can manage and track all order statuses from a dedicated dashboard.
- **User Authentication:** Secure login and registration system ensures that only authorized users and administrators can access relevant modules.
- **Inventory Tracking:** Real-time updates on stock levels, low inventory alerts, and automated updates after each order ensure efficient inventory control.
- **Centralized Admin Control:** A single admin user can manage product listings, customer data, order processing, and category definitions from one panel.

This system will improve workflow efficiency, enable accurate order tracking, and support better decision-making through real-time data, ultimately enhancing the overall retail experience.

1.5 References

Include citations for any documents, books, or standards referenced in this SRS, such as: "ISO/IEC 9126 for Software Quality Attributes, user feedback reports, or references to POS integration guidelines." Includes help of AI tool ChatGPT for better and efficient outcome of final project.

2 Overall Description

2.5 Product Perspective

The **Shoe Shop Management System** is a standalone web-based platform developed using **ASP.NET**, designed to meet the needs of footwear shop administrators and customers. It is an independent solution and does not require integration with external third-party systems such as POS devices or external marketplaces. The platform centralizes multiple functionalities—product listing, inventory management, customer registration, and order tracking—into one intuitive and accessible interface.

The system is both scalable and customizable, making it suitable for single-store setups as well as chain-level operations. The administrator can manage all product listings, categories, and customer orders, ensuring full control over the store's operations. The modular architecture also allows for future enhancements such as payment gateway integration, customer review systems, promotional offers, or even multi-vendor support.

2.6 Product Features

The major features of the **Shoe Shop Management System** include:

- **Product Listing and Management:**
  The admin can create and manage main categories (e.g., Men, Women, Kids) and subcategories (e.g., Sneakers, Sandals, Formal Shoes), allowing a systematic and organized listing of footwear. Customers can view product details and place orders directly through the platform.
- **Customer Order Management:**
  Registered users can browse the shoe catalog, add items to their cart, and place secure orders. Order details, including quantity, size, price, and status, are stored and tracked for both admin and customer access.
- **Inventory Control:**
  The system automatically adjusts product stock upon order placement and provides low-stock alerts. This helps maintain accurate inventory levels without manual intervention.
- **Admin Dashboard:**
  The admin panel includes visual summaries and analytics on product sales, user activities, and stock updates. It supports informed business decisions through real-time data representation.
- **Category-Based Product Browsing:**
  Footwear items are grouped under admin-defined categories and subcategories to provide a smooth and intuitive shopping experience for users.
- **Security and Access Control:**
  Only the admin has permission to manage the platform—adding or removing products, updating categories, viewing orders, and approving user access—ensuring full control and security.

2.7 User Classes and Characteristics

The primary user classes and their roles are:

- **Administrator:**
  - **Full access to all modules including user approvals, category management, product listings, doctor registrations, vehicle listings, and dashboard analytics.**
  - **Can edit/delete any data and manage consultations and bookings.**

- **Customers:**
    - **Can browse and purchase products, book vehicles, and consult doctors.**
    - **View weather forecasts to aid in farming planning.**

2.8 Operating Environment

- **Platform:** ASP.NET Web Forms
- **Server Environment:** IIS Server with SQL Server database
- **Supported Devices:** Desktop and Laptop (optimized for web browser access)
- **Minimum Hardware Requirements:**
  - Processor: Intel i3 or above
  - RAM: 6 GB or more
  - Storage: 128 GB minimum
- **Internet:** Required for weather forecasting and real-time functionality

2.9 Design and Implementation Constraints

- **Admin-Only Control:** The system is designed for centralized control; hence only one admin exists, and no role-based access system is implemented for now.
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- **Data Privacy Compliance:** User data must be securely stored and not shared with third parties.
- **Budget Considerations:** The system focuses on essential modules. Additional features like payment gateways or multilingual support may be added in future phases depending on funding.
- **Scalability:** Designed to allow easy feature additions and scaling to mobile platforms in future.
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2.10 User Documentation

Users will be provided with:

- A **detailed user manual** (PDF) explaining key modules: product browsing, booking vehicles, consultation process.
- **Video tutorials** demonstrating key functionalities like product purchase and weather checking.
- **In-app tooltips/help messages** for form validation, guidance, and process explanation.

2.11 Assumptions and Dependencies

- The **admin possesses basic technical knowledge** to operate the admin dashboard, manage product listings, and handle customer orders.
- No **third-party payment gateway** is currently integrated; all transactions are assumed to be handled offline or through cash on delivery unless future upgrades are made.
- The system **assumes that customers provide valid and accurate information** during registration and checkout.
- The **database and hosting environment** (IIS + SQL Server) are expected to be stable, reliable, and properly maintained.

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3 System Features

3.5 Product Management

3.5.1 Description and Priority

The Product Management feature allows the admin to add, update, or remove products listed on the platform under predefined categories and subcategories. This ensures customers can find accurate product listings and information.

3.5.1.1 **Priority:** High

3.5.1.2 **Benefit**: Improves customer service and efficiency.

3.5.1.3 **Penalty**: Can lead to errors and dissatisfaction.

3.5.1.4 **Cost**: Moderate.

3.5.1.5 **Risk:** Some UI/UX and integration challenges.

3.5.2 Stimulus/Response Sequences

Order Entry:
When a customer places an order, the system stores the order details in the database and displays them in the admin dashboard for processing.

Order Modification:
The admin can update order status (e.g., "Processing", "Shipped", "Delivered") and make changes to quantities or products if needed. The changes are reflected in real-time on the customer's order history page.

Order Status Notification:
The system updates the customer through their account or order page once the order is shipped or delivered, keeping them informed of their purchase status.

3.5.3 Functional Requirements

3.5.3.1 **OM-1**: Allow waitstaff to create orders, selecting items with quantity and special requests.

3.5.3.2 **OM-2**: Generate unique order IDs and display them in the kitchen within 2 seconds.

3.5.3.3 **OM-3**: Allow order modifications until marked "Prepared."

3.5.3.4 **OM-4**: Notify waitstaff when the order is marked "Ready."

3.5.3.5 **OM-5**: Handle invalid inputs with error messages, preventing submission.

3.6 Order Management and Tracking

The **Order Management and Tracking** module is responsible for handling customer orders from placement to delivery. Once a customer selects a shoe and confirms the order, the system records the transaction and allows the admin to monitor and manage its progress.

Key functionalities include:

- **Order Placement:**
  Customers can place an order by selecting a product, size, quantity, and delivery address. The system confirms and stores the order with a unique order ID.
- **Order Processing:**
  The admin can view all incoming orders via the dashboard, update the order status (e.g., Processing, Shipped, Delivered), and handle inventory adjustments automatically.
- **Order History and Status Tracking:**
  Customers can view their order history, including current status updates, expected delivery dates, and product details.
- **Admin Control:**
  The admin has full authority to edit or cancel orders if required and maintain logs for reporting purposes.

3.5 Cart and Checkout System

3.5.1 Description and Priority

Customers can add products to their cart, view total cost, and place orders with delivery information. Cart items are managed by user session.

- **Priority:** High
- **Benefit:** Streamlines buying process.
- **Penalty:** Broken checkout leads to drop in sales.
- **Cost:** Low to moderate.
- **Risk:** Requires consistent state management.

3.5.2 Stimulus/Response Sequences

- Add to cart: System stores product under user's cart list.
- Checkout: System calculates total and saves order with status.

3.5.3 Functional Requirements

- **CO-1:** Add/remove products to/from cart.

- **CO-2:** Calculate grand total based on quantity.
- **CO-3:** Allow placing orders with address and contact.
- **CO-4:** Store order under user profile and admin's order list.
- **CO-5:** Show order success or failure message.

3.6 Admin Dashboard

3.6.1 Description and Priority

The admin dashboard provides summaries and control for all modules – product, vehicle rental, user management, doctor registration, etc.

- **Priority:** High
- **Benefit:** Single-point control for admin.
- **Penalty:** Poor dashboard reduces efficiency.
- **Cost:** Low to moderate.
- **Risk:** Needs responsive UI for large data.

3.6.2 Stimulus/Response Sequences

- Page load: Show stats like total products, orders, vehicles, bookings, etc.
- Click actions: Redirects to related management pages.

3.6.3 Functional Requirements

- **AD-1:** Show total users, orders, categories, and products.
- **AD-2:** View recent transactions and doctor registrations.
- **AD-3:** Redirect buttons for managing categories, products, etc.
- **AD-4:** Summarize orders by day/week/month.

3.7 Reports generation

3.7.1 Description and Priority

The Reporting and Analytics feature provides sales, inventory, and performance reports to assist managers in making data-driven decisions. Reports include metrics like peak hours, popular menu items, and ingredient usage.

3.7.1.1 **Priority**: Medium

3.7.1.2 **Benefit**: Provides insights that can help improve operational efficiency and menu offerings.

3.7.1.3 **Penalty**: Limited impact on immediate operations, but lack of data insights may affect long-term planning.

3.7.1.4 **Cost**: Moderate cost due to data processing and reporting functionality.

3.7.1.5 **Risk**: Minimal risk with effective database and analytics integration.

3.7.2 Stimulus/Response Sequences

3.7.2.1 **Sales report**: The system generates a report displaying total sales, top-selling items, and busiest hours.

3.7.2.2 **Inventory usage**: The system retrieves data on ingredient consumption, showing trends and high-use items.

3.7.3 Functional Requirements

3.7.3.1 **RA-1**: Generate customizable sales reports by daily, weekly, and monthly intervals, showing

total revenue, items sold, and peak hours.

3.7.3.2 **RA-2**: Provide inventory usage reports detailing ingredient consumption, waste, and ordering trends.

3.7.3.3 **RA-3**: Generate graphical representations (charts/graphs) of sales and inventory data for easier analysis.

3.7.3.4 **RA-4**: Allow managers to export reports in PDF and CSV formats for external review.

3.7.3.5 **RA-5**: Safeguard report data with access restrictions to authorized users only.

4 External Interface Requirements

4.5 User Interfaces

- Product **Listing and Selling Interfaces:**

Admins can create and manage main categories (e.g., Men, Women, Kids) and subcategories (e.g., Sneakers, Loafers, Sandals). Each shoe can be listed with a name, price, size, image, and description. Customers can browse products under filtered categories and add them to their cart. The product entry form allows image uploads and dynamic category selection for easy management.

- Order **Management Section:**

Displays a list of all customer orders with details like product name, quantity, price, and status. Admins can update each order's status (e.g., Processing, Shipped, Delivered) and manage order records through the admin dashboard. Customers can track their order status from their profile section.

- Analytics **Displays:**

The admin dashboard includes graphical insights showing total orders, top-selling categories, stock levels, and customer trends. Charts and filters by product category, time frame, or order status help the admin make strategic decisions based on real-time data.

- Billing **& Order Summary:**

At checkout, customers see a clear, itemized list of selected products along with their quantities and total amount. After order placement, the admin can view and manage order summaries. Invoices or receipts can be downloaded, printed, or sent to customers.

4.6 Hardware Interfaces

This section describes potential ways the system may interact with physical devices. While the Shoe Shop Management System does not currently include hardware integration, future versions could incorporate the following:

- Barcode Scanners:
  To quickly identify products during inventory management or order processing in a physical retail setup. *(Not currently implemented)*
- Card Readers:
  To enable cashless, in-person payments during order pickup or delivery at the store. *(Not currently implemented)*
- Printers:
  For printing physical invoices, order summaries, or receipts for walk-in customers. This feature could be added to enhance in-store service. *(Optional future feature)*

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4.7 Communications Interfaces

Description: Outlines the system's data exchange mechanisms. The current version is mainly server-side and uses basic web protocols.

- **HTTP/HTTPS**: Used for standard communication between client browsers and the ASP.NET Web Forms backend.
- **No WebSocket or Real-time Protocols**: No real-time chat or notification system is included in this version.
- **No External APIs beyond OpenWeather**: External services for maps, chatbots, or tracking are not used at this stage.

5 Other Nonfunctional Requirements

5.5 Performance Requirements

Define performance benchmarks, such as response times for order processing or the system's ability to handle high traffic. The RMS should process transactions within 6-10 seconds and generate reports within 10-15 seconds under normal load.

5.6 Safety Requirements

Detail any safety features, especially around food handling data or emergency protocols for handling customer or employee information.

5.7 Security Requirements

The system will implement user authentication to ensure that only authorized personnel can access it. Access to sensitive functions, such as billing and inventory management, will be restricted to authorized users. Although customer data, including customer names, will be handled with appropriate security measures, no encryption is used in this version to protect sensitive information.

5.8 Software Quality Attributes

Describe additional software quality goals, like usability, reliability, and scalability, to ensure that the system performs well under various conditions. The RMS will prioritize usability with an intuitive interface, reliability to maintain 99.9% uptime, and scalability to accommodate multiple branches.

6 Other Requirements

Include any additional requirements, such as regulatory compliance, licensing, or specific technology preferences.

Appendix A: Glossary

6(A) 1: Authentication
Authentication is the process of verifying the identity of an admin or customer before granting access to specific features, such as managing orders, viewing the product catalog, or updating account details.

6(A) 1: Billing
Billing involves generating and managing invoices for customers based on their shoe purchases, including taxes, discounts, and total amounts due for payment, ensuring smooth financial operations in the shop.

6(A) 1: Customer Name
The customer's name is captured and stored within the system for identification purposes, enabling personalized service, order tracking, and customer relationship management in the shoe shop.

6(A) 1: Inventory Management (IM)
Inventory Management (IM) involves tracking the stock levels of shoes and accessories, managing restocking procedures, and ensuring the availability of popular sizes and styles, all within the system for efficient order fulfillment.

6(A) 1: POS (Point of Sale)
The POS system allows customers to place orders, customize their selections, and request modifications like size changes or color preferences. It also helps in processing payments and generating receipts for customers.

6(A) 1: Staff Management (SM)
Staff Management (SM) includes managing the shop's employees, such as adding new staff, updating their details, assigning roles (sales associates, cashiers), and tracking working hours and attendance to ensure proper workforce management.

6(A) 1: Table Management (TM)
In a shoe shop context, Table Management (TM) refers to tracking the status of different sections or areas in the store (such as stockrooms or display tables) and ensuring efficient use of space to organize products and serve customers.

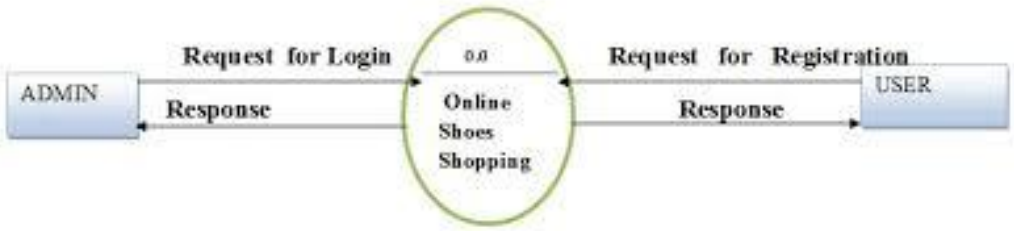
6(A) 1: Supplier Management (SUP)
Supplier Management (SUP) focuses on managing relationships with suppliers for shoe products and accessories, placing orders for new stock, monitoring delivery schedules, and ensuring that all products meet the store's quality and inventory needs.

Appendix B: Analysis Models

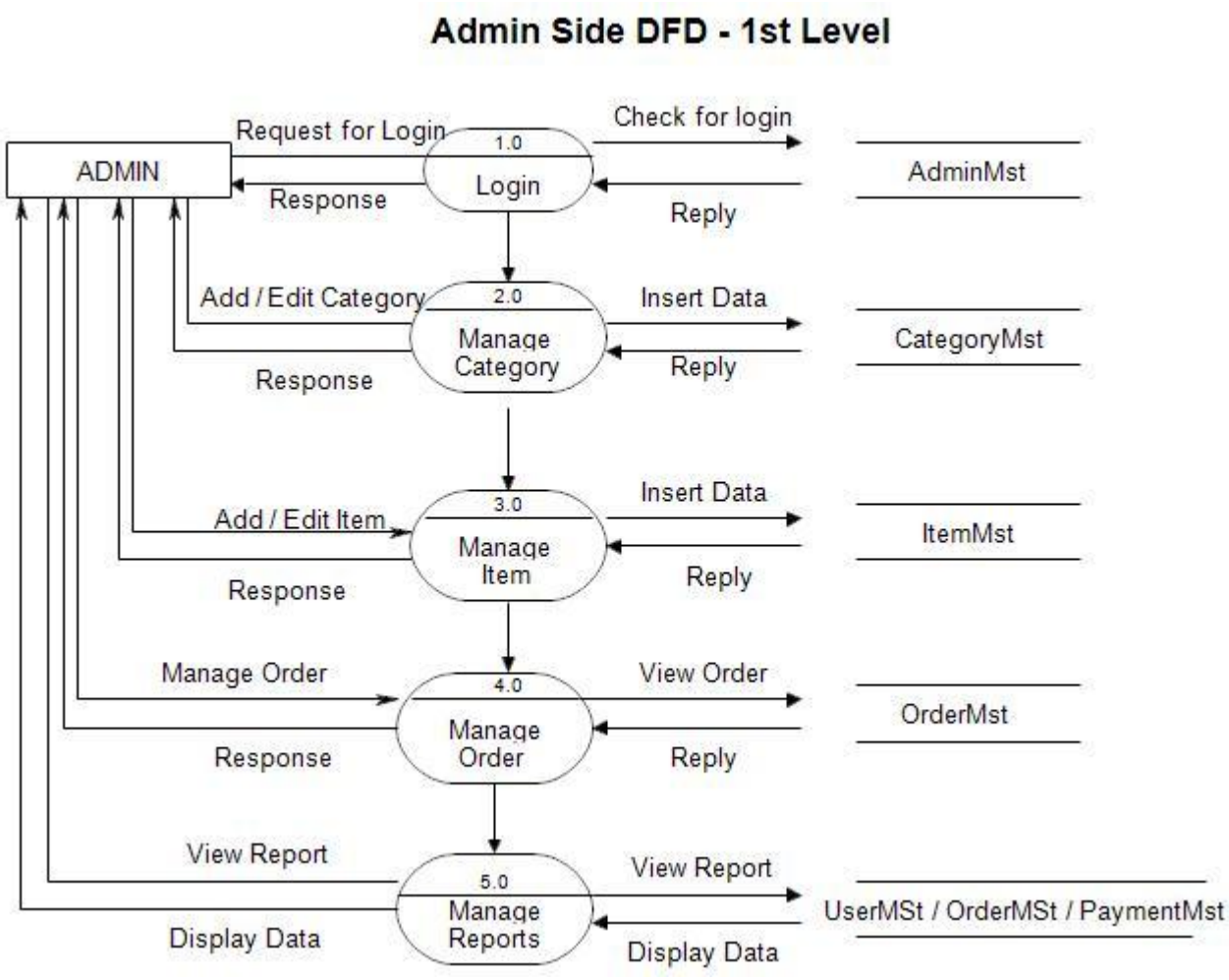
Here is the diagrams related to project :

- **DFD (Data Flow Diagram):**

0 Level :



1 Level admin :



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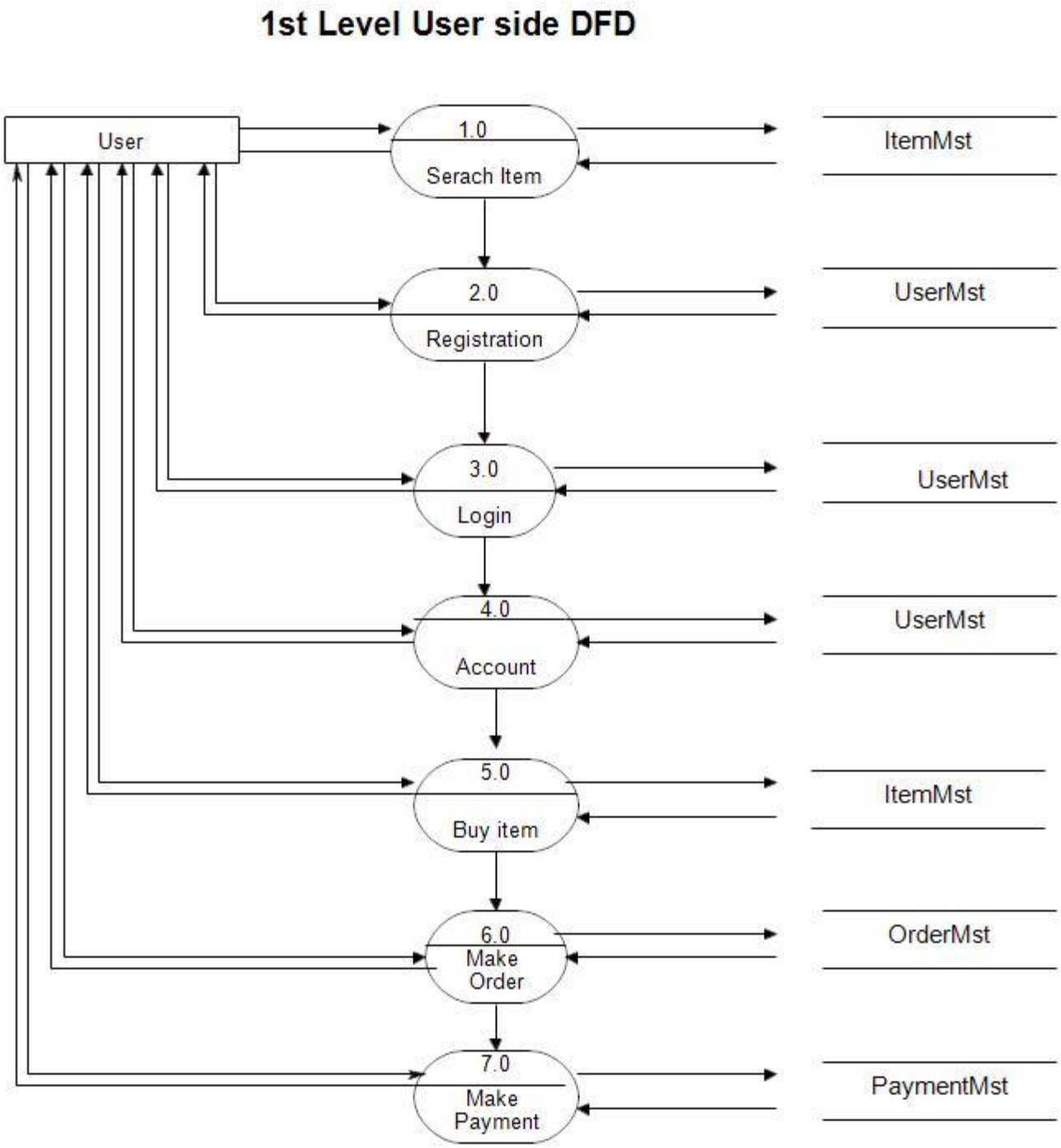
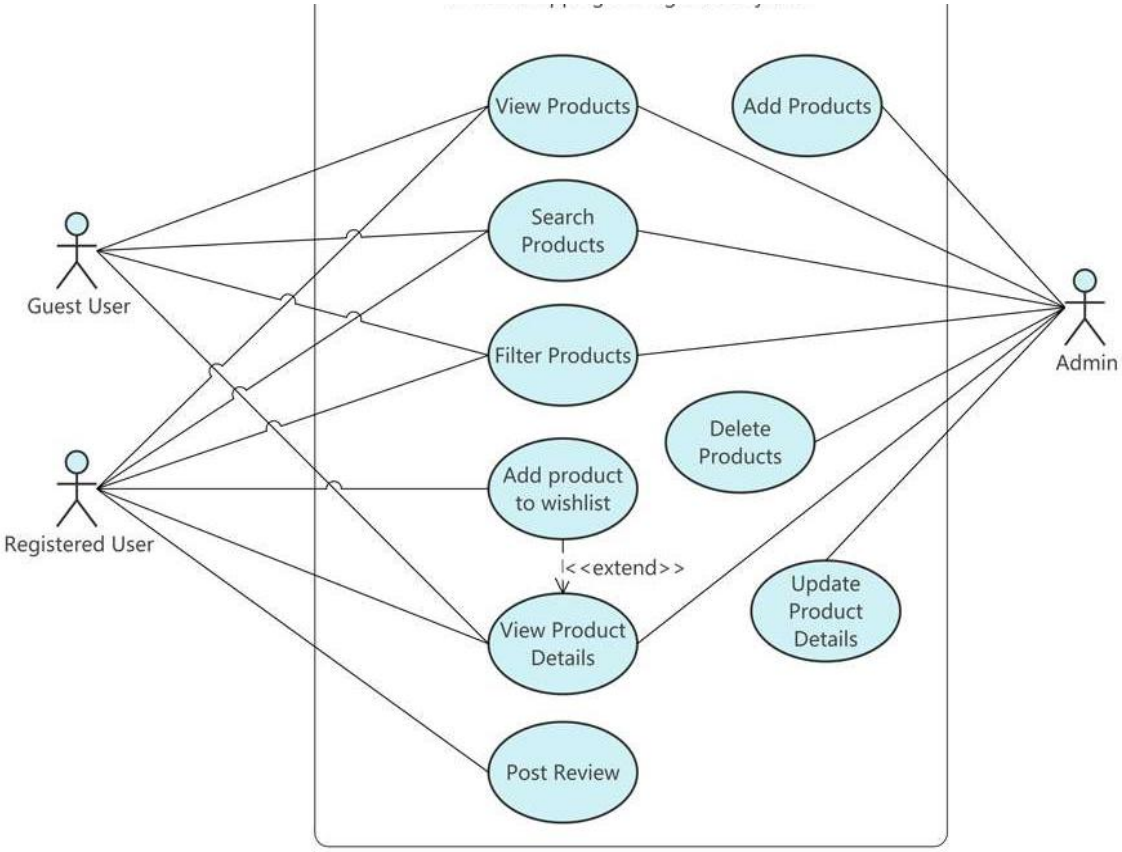
2 **Level user :**



- **Use Case Diagram :**


View Products
Add Products
Search Products
Guest User
Filter Products
Admin
Delete Products
Add product to wishlist
Registered User
<<extend>>
Update Product Details
View Product Details
Post Review

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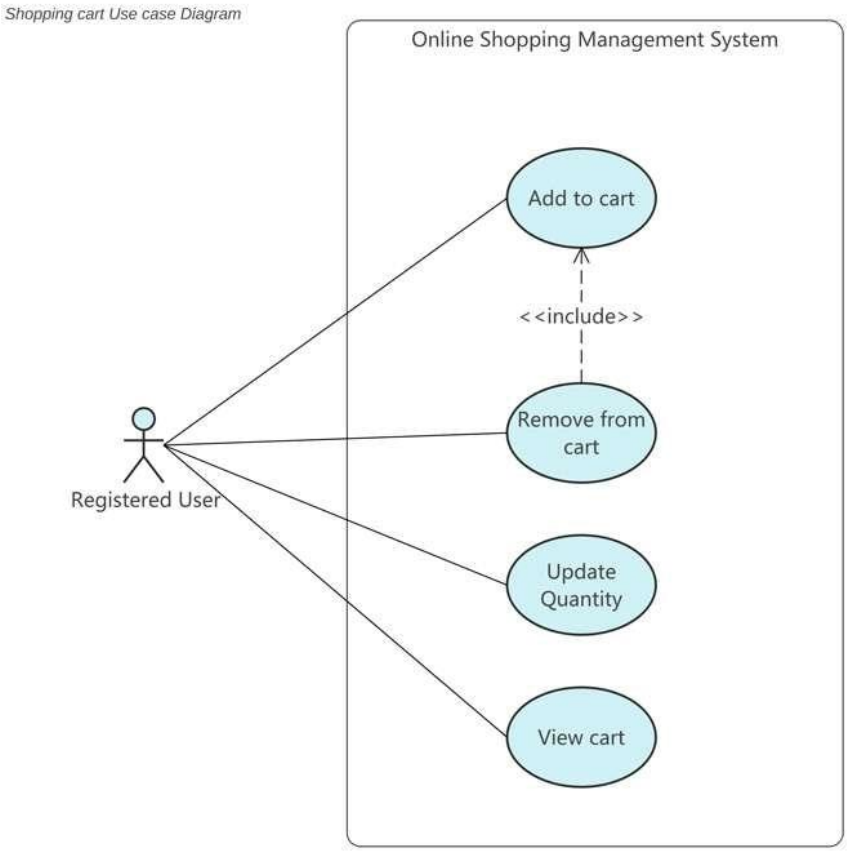
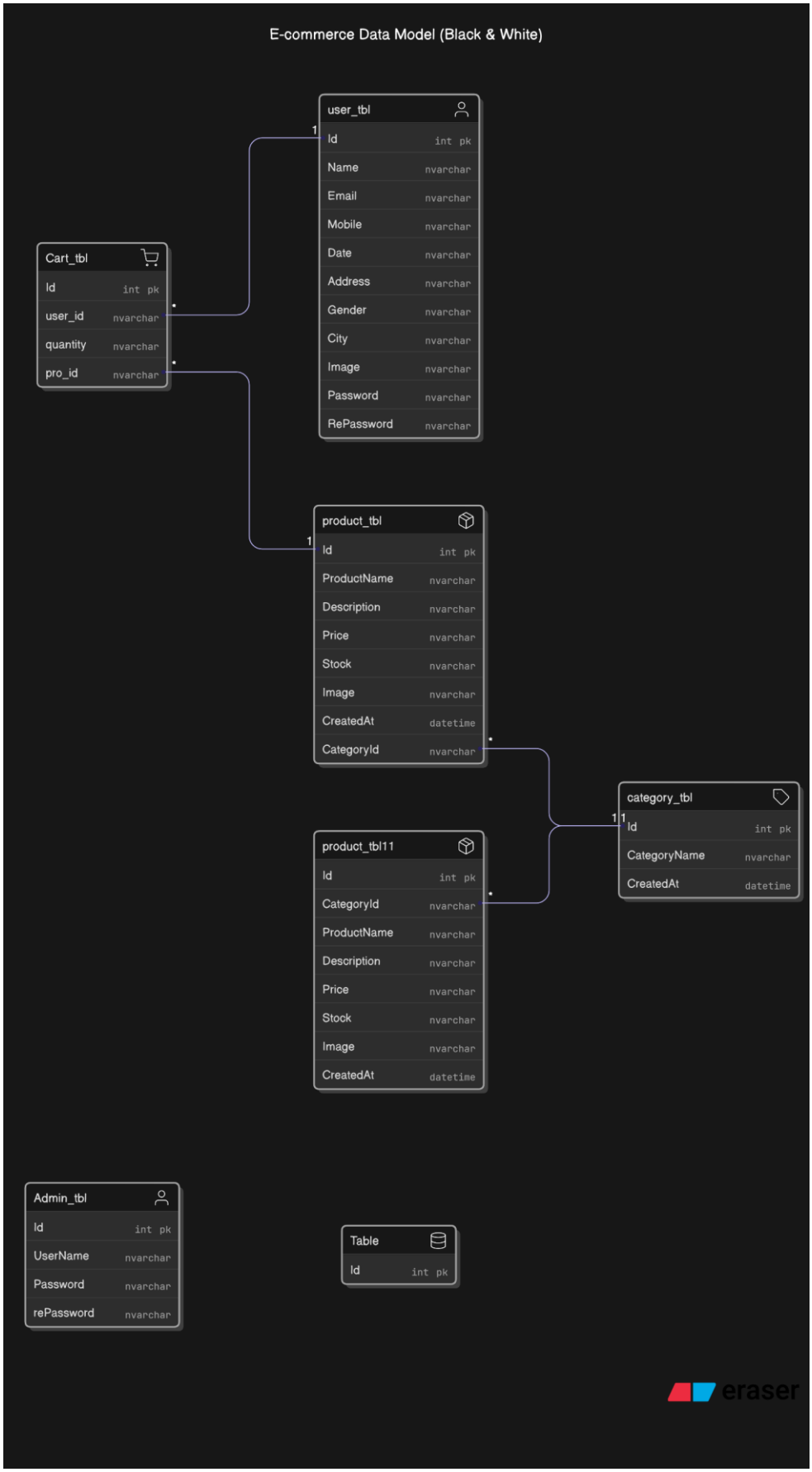
■ Use Case for cart :



■ **ER Diagram：**


E-commerce Data Model (Black & White)
user_tbl
Id int pk
Name nvarchar
Email nvarchar
Mobile nvarchar
Date nvarchar
Address nvarchar
Gender nvarchar
City nvarchar
Image nvarchar
Password nvarchar
RePassword nvarchar
Cart_tbl
Id int pk
user_id nvarchar
quantity nvarchar
pro_id nvarchar
product_tbl
Id int pk
ProductName nvarchar
Description nvarchar
Price nvarchar
Stock nvarchar
Image nvarchar
CreatedAt datetime
CategoryId nvarchar
category_tbl
Id int pk
CategoryName nvarchar
CreatedAt datetime
product_tbl11
Id int pk
CategoryId nvarchar
ProductName nvarchar
Description nvarchar
Price nvarchar
Stock nvarchar
Image nvarchar
CreatedAt datetime
Admin_tbl
Id int pk
UserName nvarchar
Password nvarchar
rePassword nvarchar
Table
Id int pk
eraser

Appendix C: Issues List

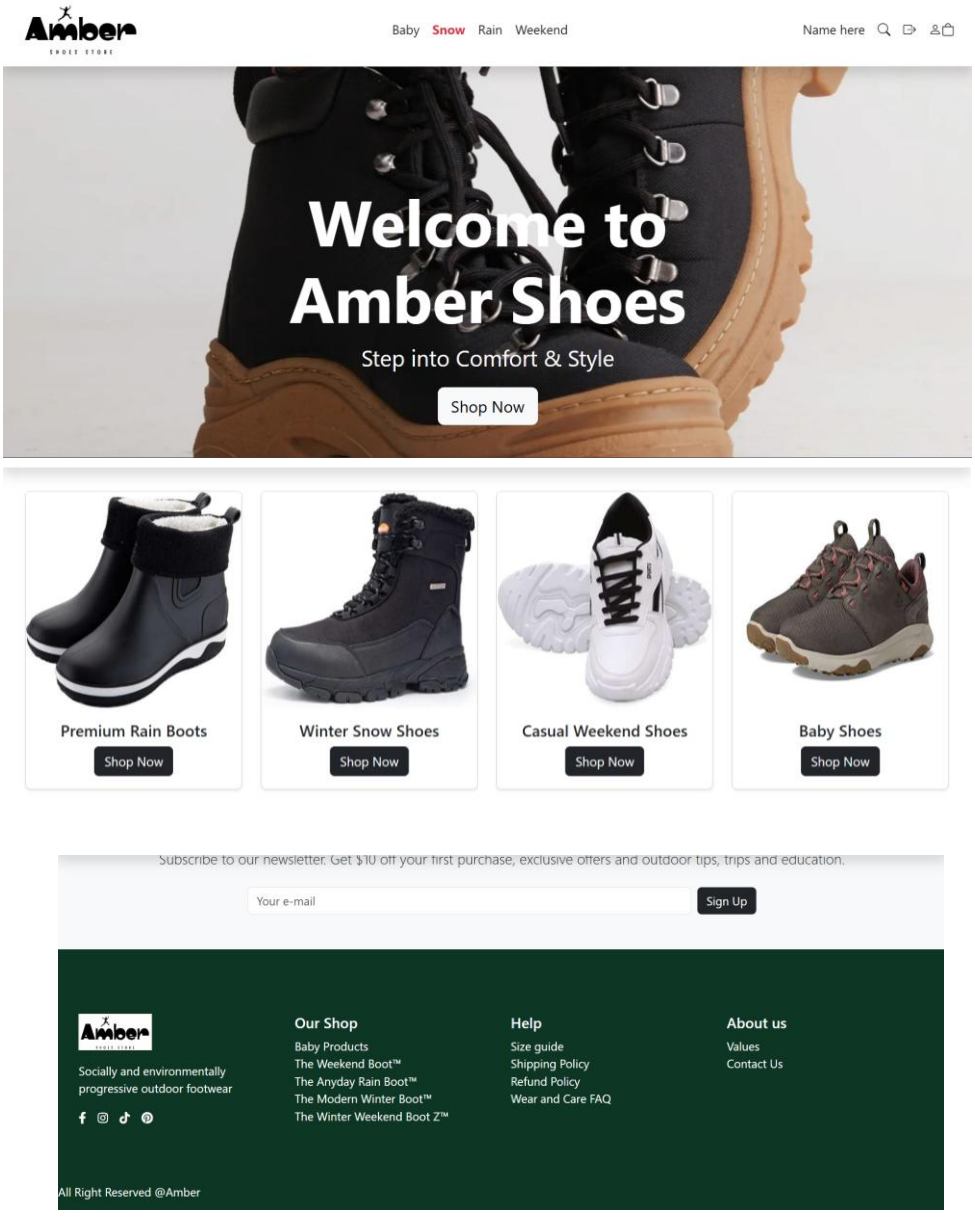
This is a dynamic list of open requirements issues that remain to be resolved for the Restaurant Management System. It includes items that are yet to be determined, pending decisions, information that is needed, and any unresolved conflicts.

1. Unable to Send Bills to Customers

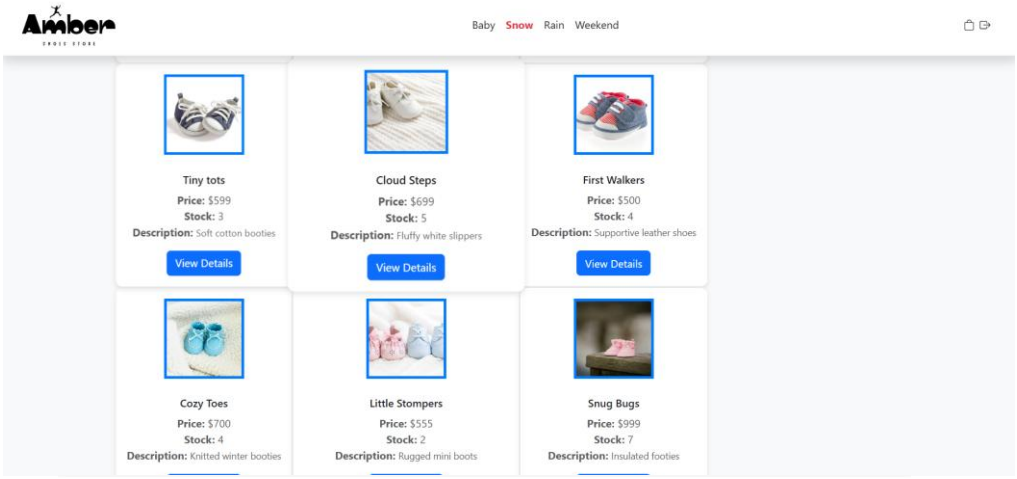
- **Description**: The system currently lacks the functionality to send bills to customers via email, SMS, or messaging apps.
- **Impact**: Limits convenience for customers and hinders efficient communication regarding billing.
- **Resolution Status**: Pending development of a messaging feature to enable bill delivery.

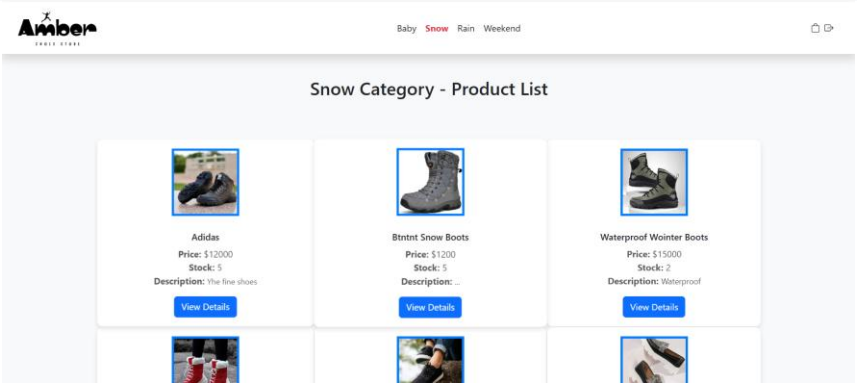
7 UI Designs :

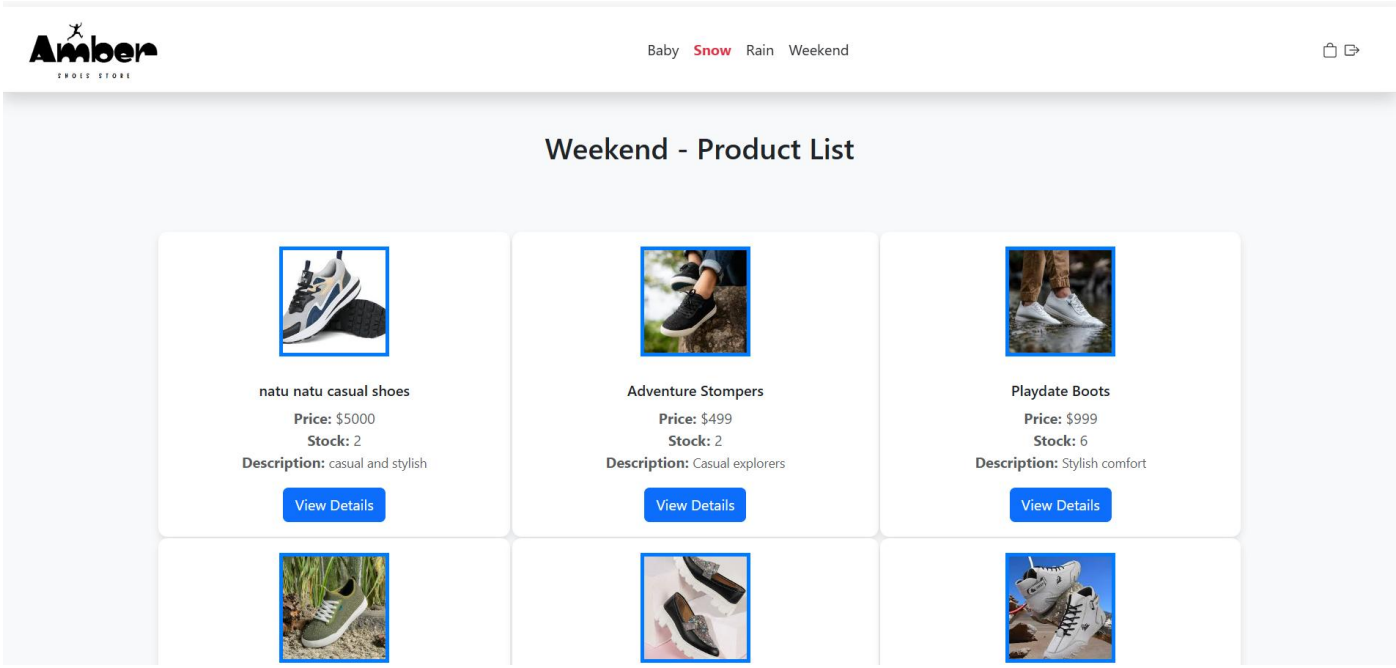
Home page :



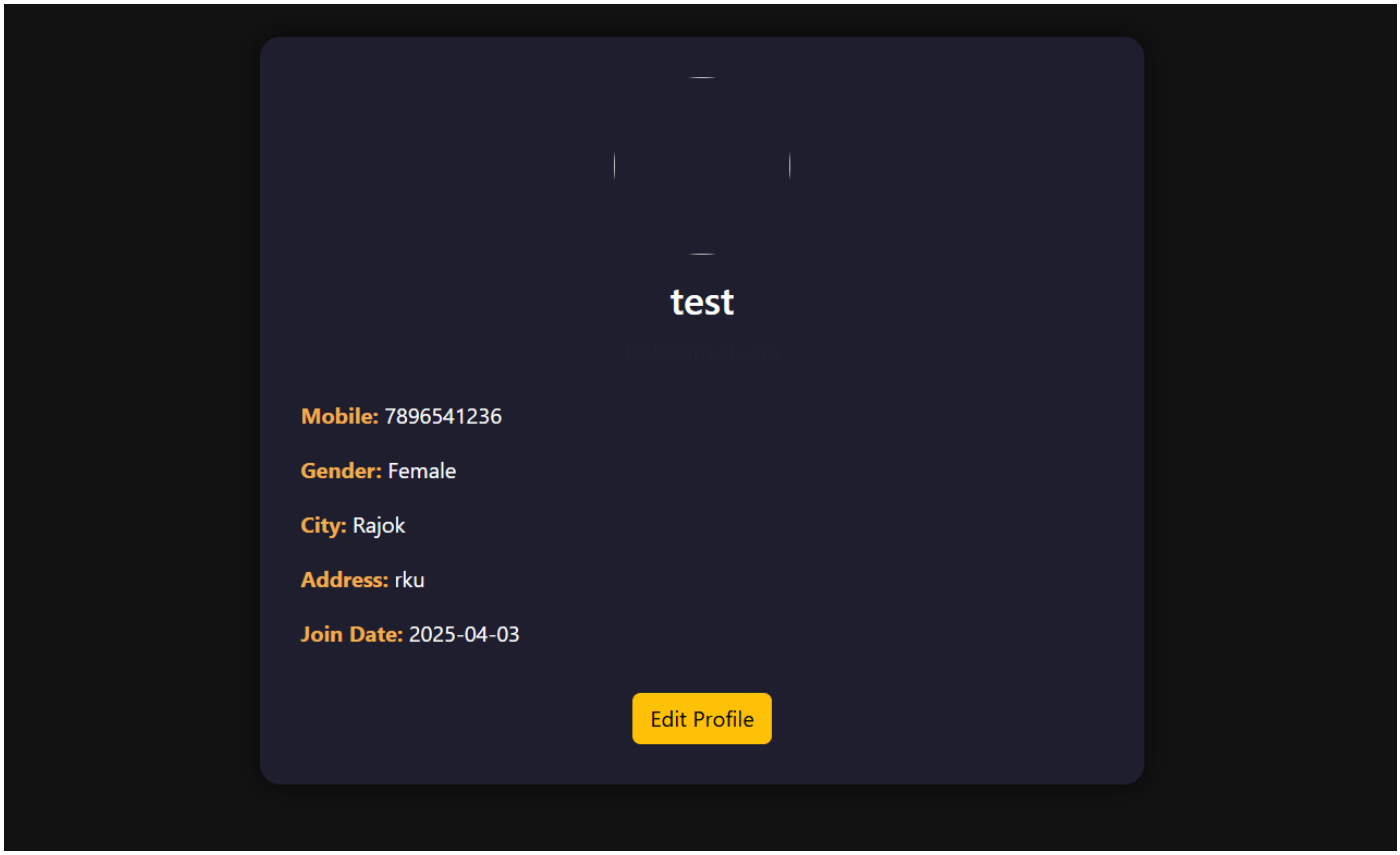
Product Pages :



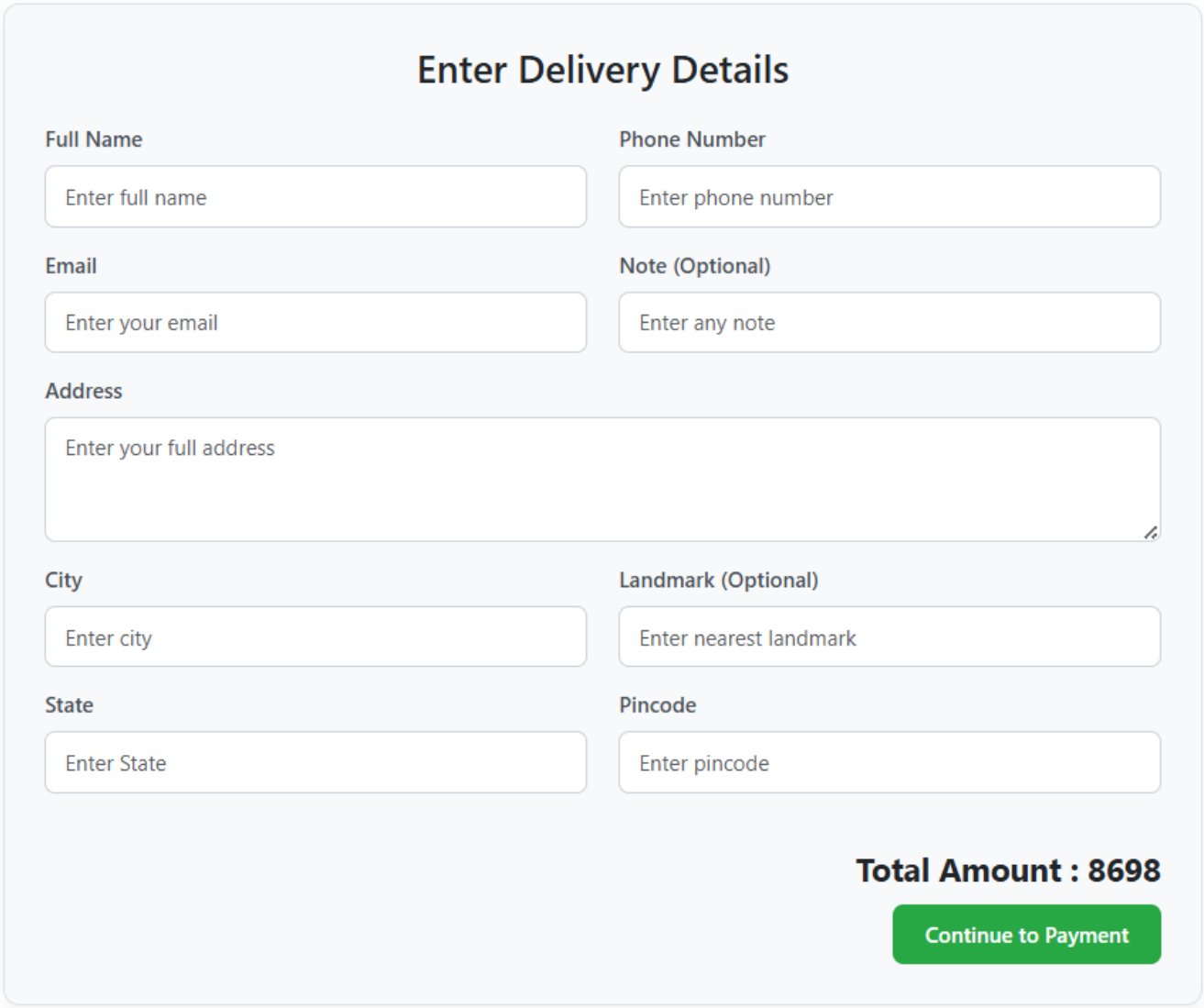




My Profile page :



My Orders page :



My Cart Page :

Amber SHOES STORE

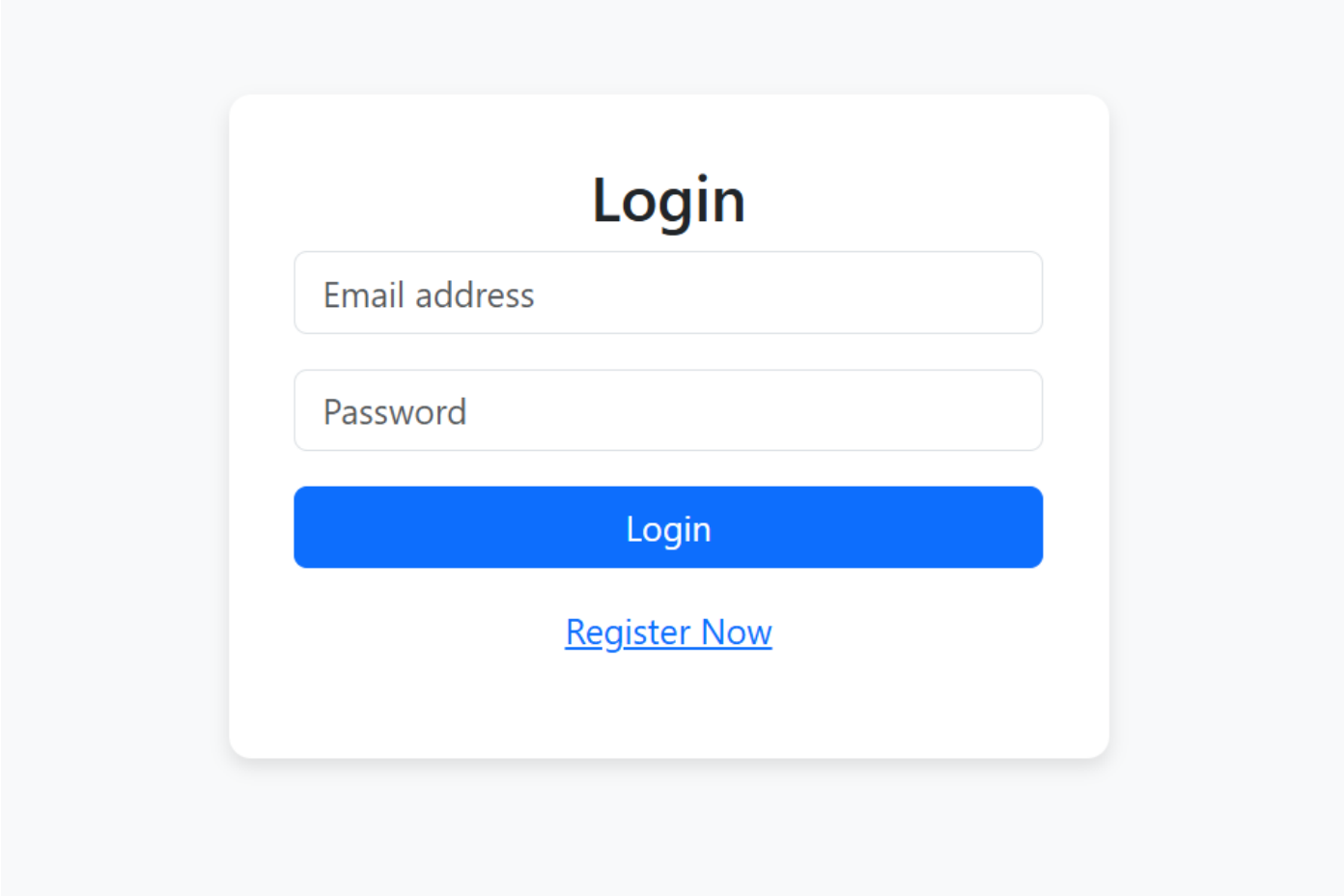
Baby Snow Rain Weekend

Image	Name	Quantity	Price	Total	Remove
	Rain Shoes	1	5000	5000	Remove
	Btntnt Snow Boots	1	1200	1200	Remove
	Relaxed Rompers	1	1499	1499	Remove
	Starry Steps	1	999	999	Remove

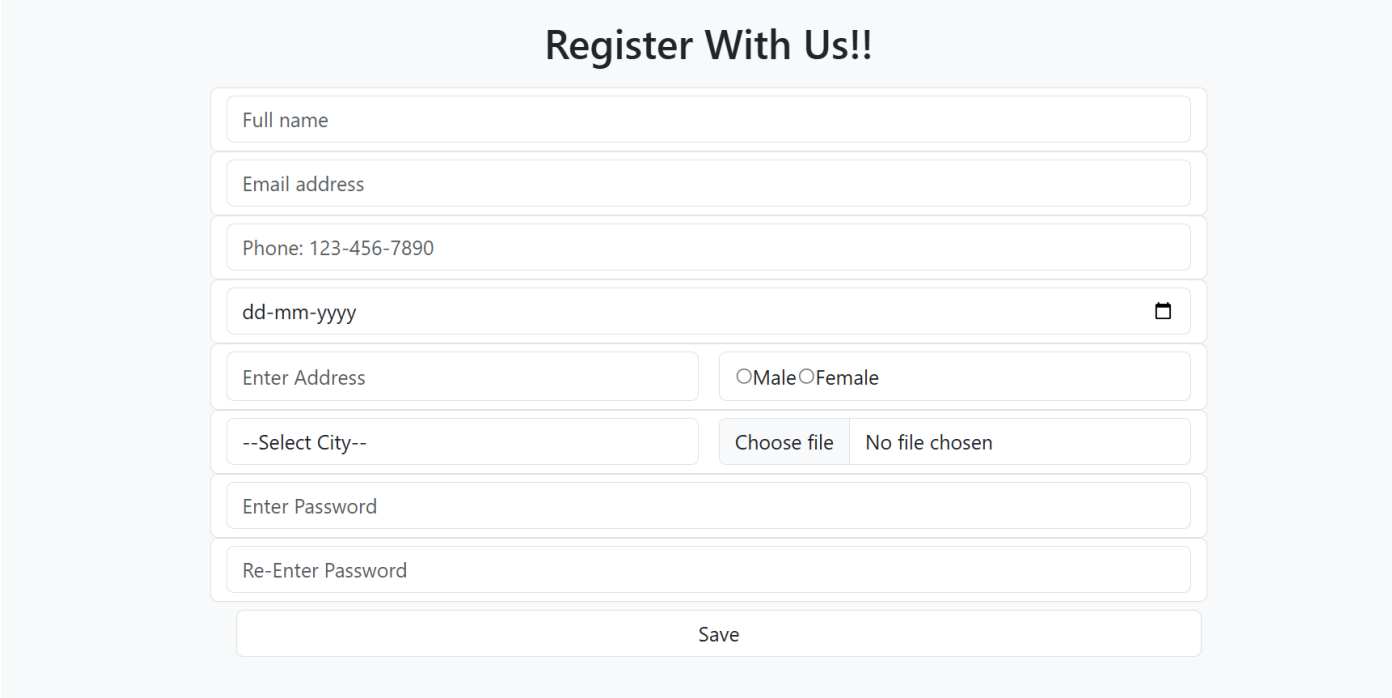
Total Amount: 8698

Proceed to Checkout

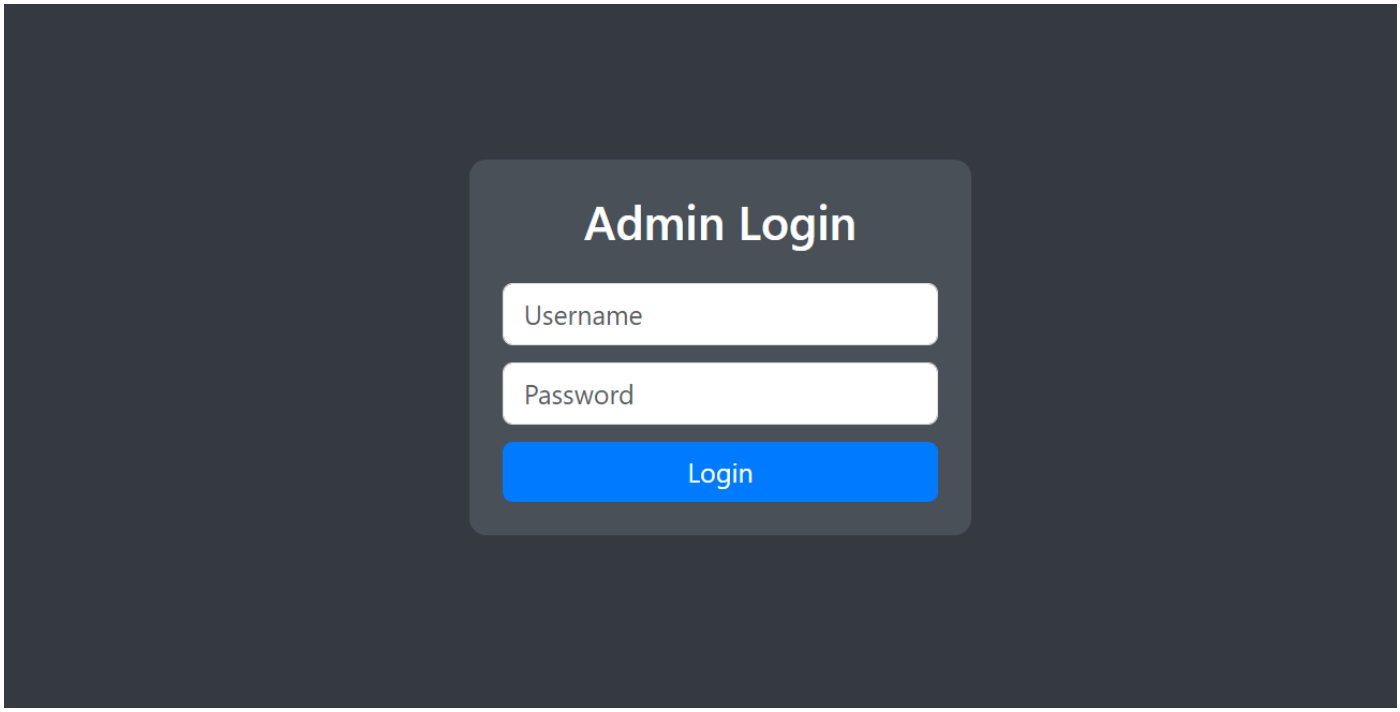
Login Page :



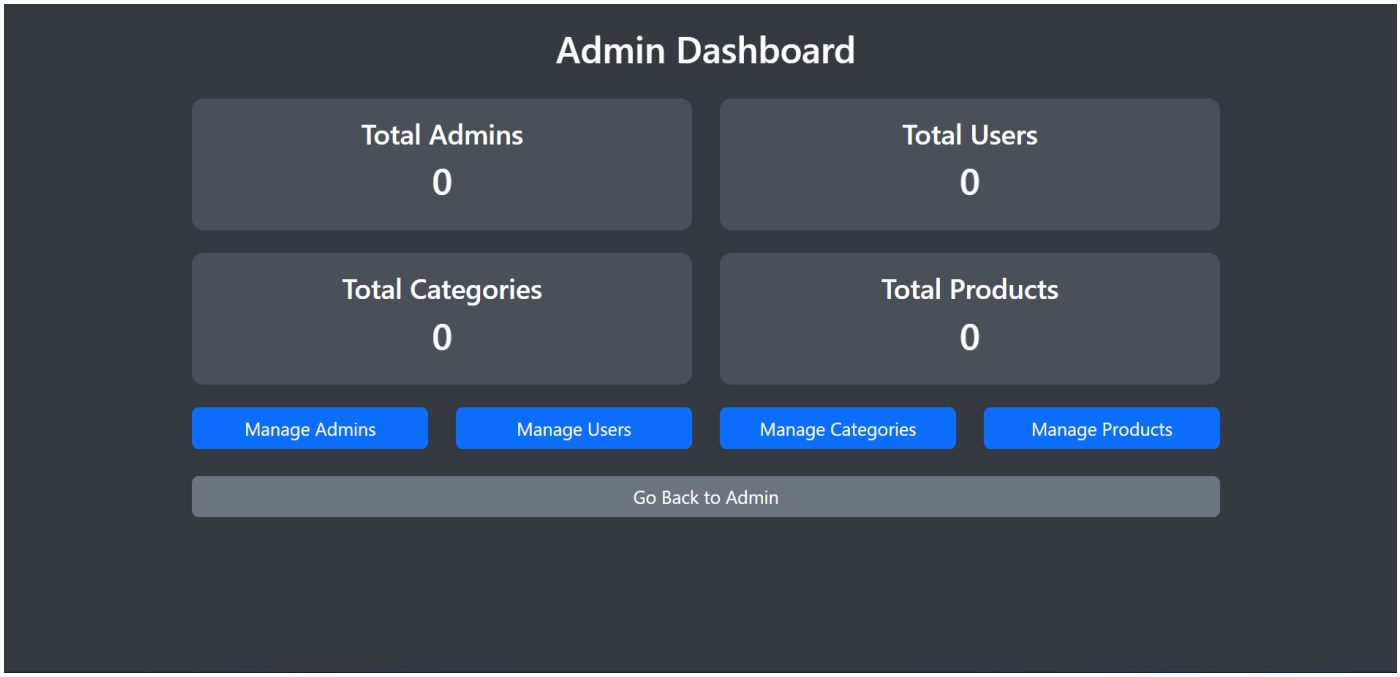
Register page :



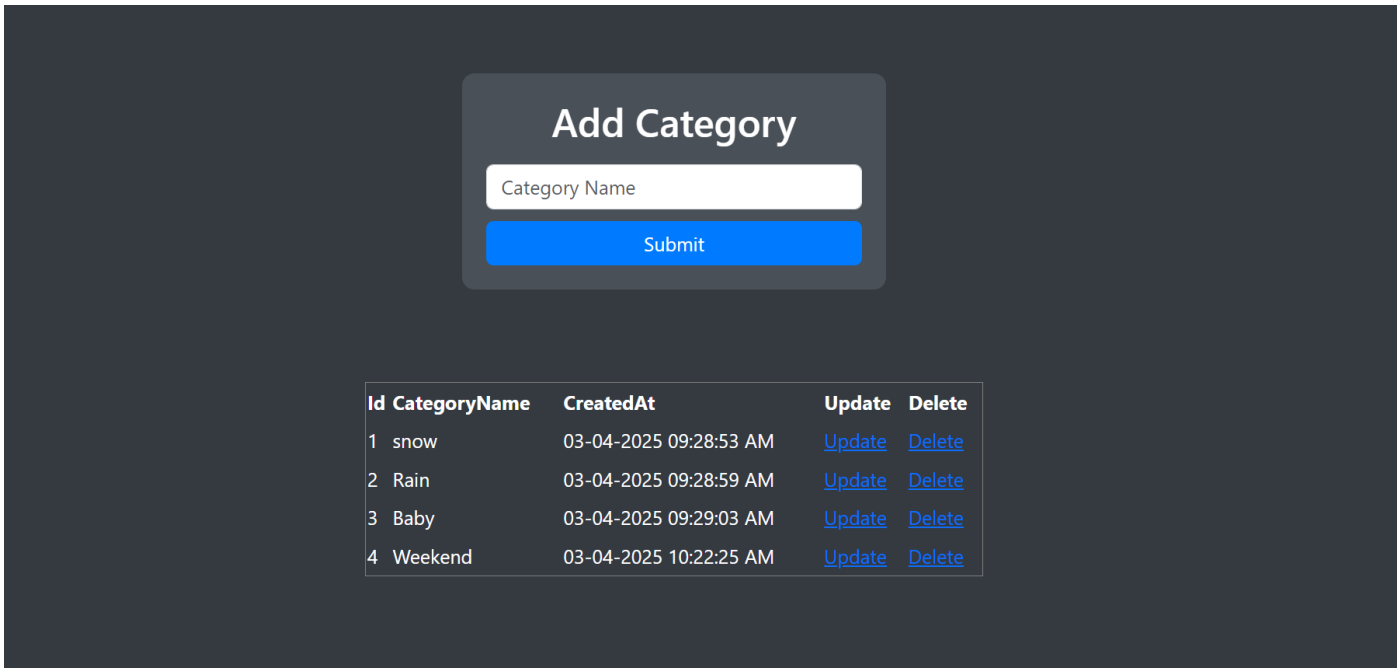
Admin Login page :



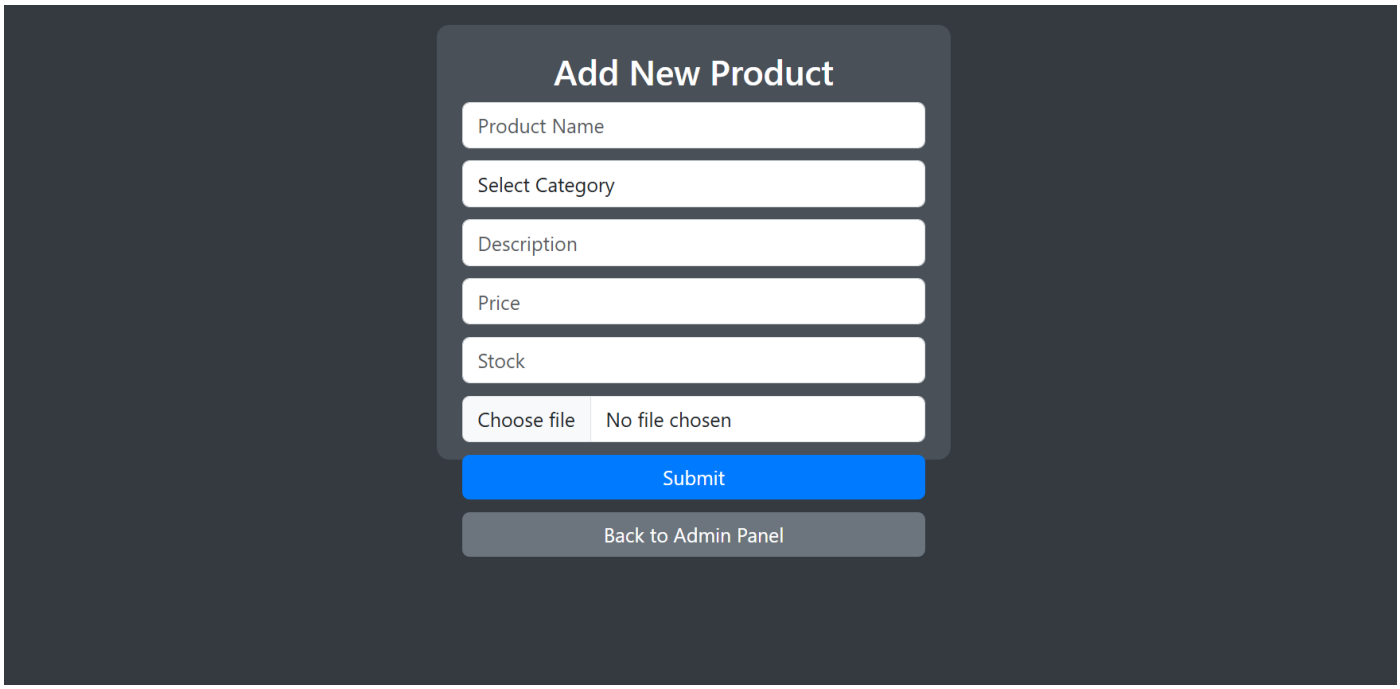
Admin Dashboard :



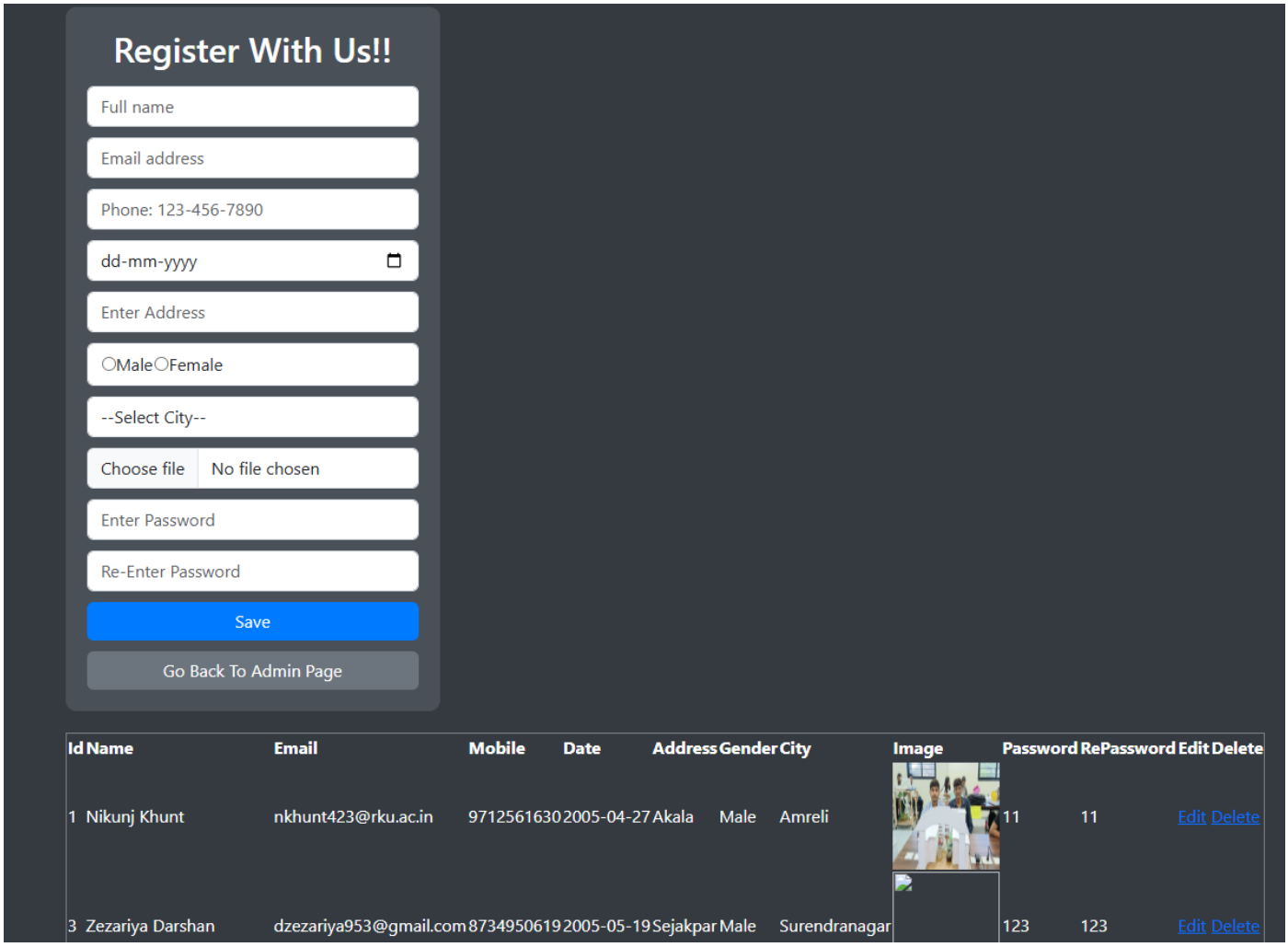
Categories page :



Product’s page :



All users page :



All admins page :