Course Title: Software Project 2
Course Code: CSE 236

Software Requirements Specification
For
Bus Ticket Management System

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Software Requirements Specification (SRS)

for

Bus Ticket Management System

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Customer: **Mr. X**

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1 Introduction:

This Software Requirements Specification (SRS) documentation is designed to facilitate the booking of bus tickets, enabling users to search for buses by date, purchase tickets online, track the real-time location of buses, and manage user accounts. Additionally, it allows administrators to manage user accounts, as well as add and manage other administrative and seller accounts.

1.1 Purpose: The purpose of this Software Requirements Specification (SRS) document is to provide a comprehensive overview of the Bus Ticket Management System. People can get their tickets from any place. On occasion time people suffer a lot to buy a ticket. This system will free people from the suffering. Moreover over the organization will have organized data and information from this system.

1.2 Scope: This system will serve both passengers and bus operators, allowing passengers to easily plan their journeys, purchase tickets, and track their booked buses. It also enables bus operators to manage schedules and monitor their fleet. Administrators will have control over user accounts and system access.

2. System Overview

2.1 System Description: The Bus Ticket Management System is a web-based application that offers the following key features:

- **User Registration and Login:** Users can create accounts and log in to the system. Admins have the capability to add and manage administrative and seller accounts.
- **Bus Search and Booking:** Users can search for available buses based on date, view bus details including departure times and fares, and book tickets online. The system will support multiple bus routes.
- **Online Ticket Purchase:** Users can select their desired bus route, date, and the number of tickets they wish to purchase. Payment processing should be secure and support multiple payment methods.
- **Real-time Bus Tracking:** Users can track the real-time location of their booked buses using GPS technology integrated into the buses. This feature enhances passenger safety and provides real-time updates on bus arrivals.

3. Functional Requirements

3.1 User Registration and Authentication

- **User Registration:** Users can register with the system by providing necessary information, including name, email, phone number, and password.
- **User Login:** Registered users can log in with their email and password.
- **Seller Login:** Registered users can log in with their email and password.
- **Admin Login (UC-04):** Admins can log in with their designated credentials.

3.2 Bus Search and Booking

- **Bus Search:** Users can search for available buses by specifying the date of travel. This system displays a list of available buses, including details such as departure time, bus type, and fare.
- **Bus Booking:** Users can select a bus, specify the number of tickets, and proceed to the booking process. Payment can be made through various methods (credit card, debit card, online wallets, etc.).

3.3 Real-time Bus Tracking

- **Real-time Bus Location (UC-06):** Users can track the real-time location of their booked buses on a map. The system updates the bus location periodically based on GPS data.

3.4 Admin Functions

- **Add Admin (UC-07):** Admins can add new administrative users to the system.
- **Manage Admin and Seller Accounts (UC-08):** Admins can edit, disable, or delete administrative, seller, and user accounts also can manage user accounts, view bookings, and monitor bus operations.

3.5 User Accounts

3.5.1. User Registration

- Users can create accounts with personal information for a personalized experience.
- User accounts will store booking history and preferences.

3.5.2. User Authentication

- Users must log in to access certain features, such as booking and tracking.

4. Non-Functional Requirements

4.1 Performance

- The system should be able to handle a high volume of simultaneous users.
- Response times for search, booking, and tracking should be minimal.

4.2 Security

- User data should be securely stored and transmitted.
- Payment processing must adhere to industry-standard security practices.

4.3 Usability

- The user interface should be intuitive and user-friendly.
- The system should be accessible on various devices and browsers.

4.4 Reliability

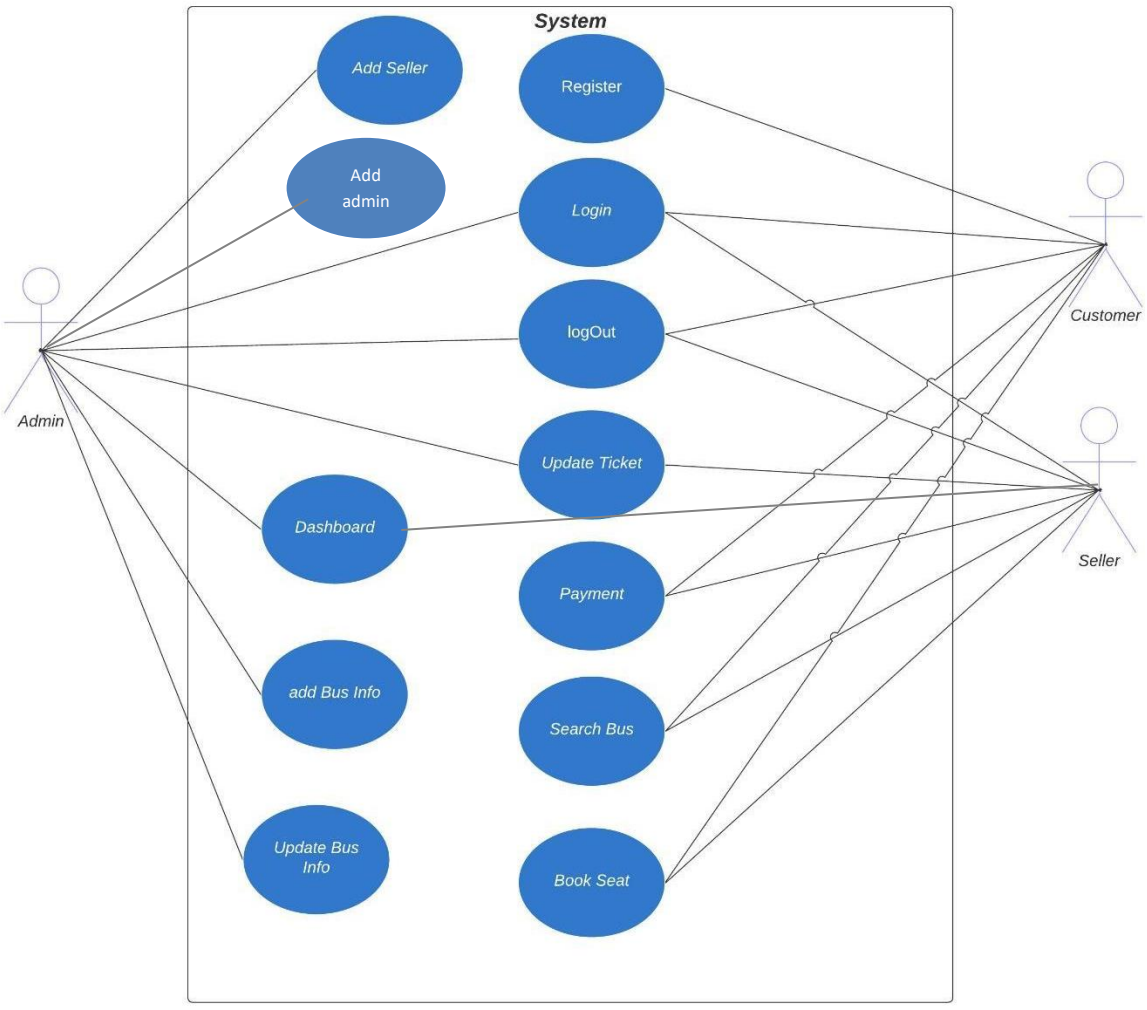
- The system should be available 24/7 with minimal downtime for maintenance.

4.5 Scalability

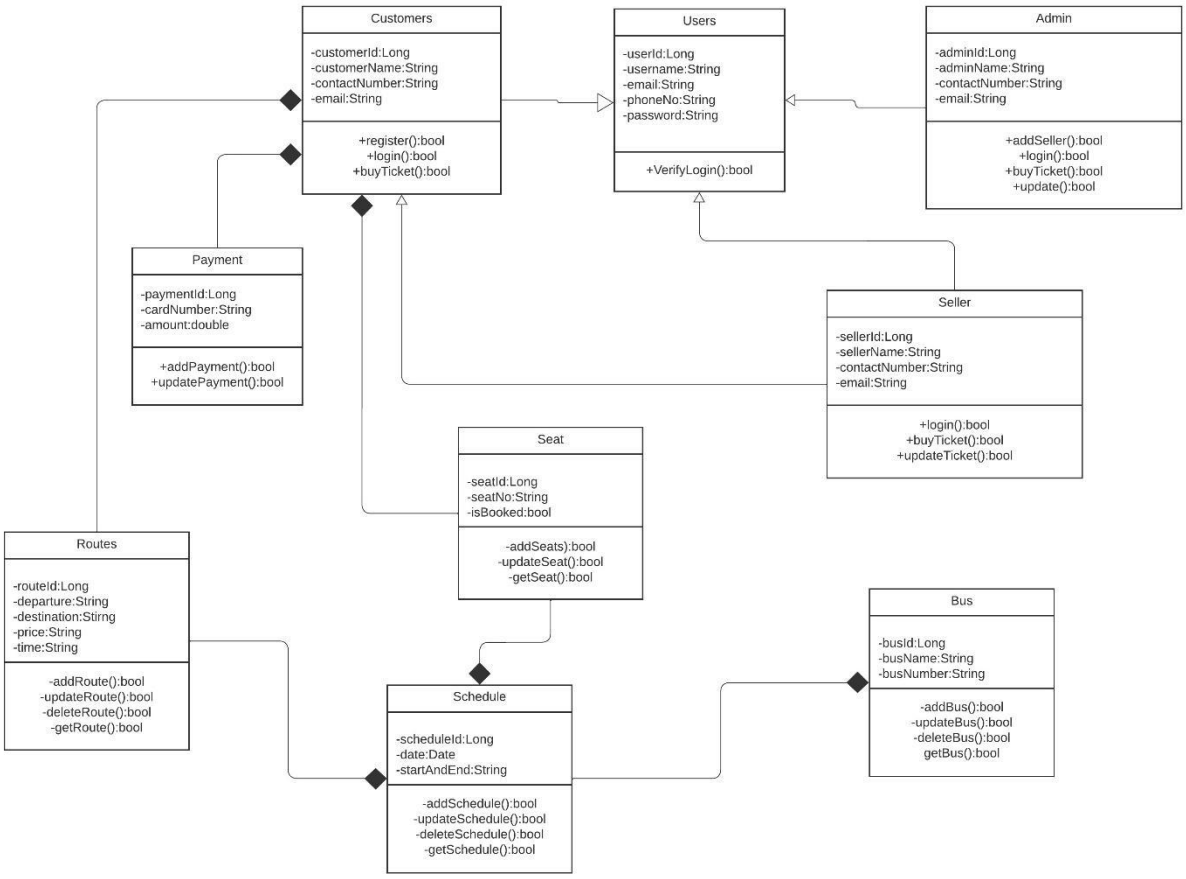
- The system should accommodate future expansion, including additional bus routes and features.

5. Appendices:

5.1 Use Case Diagram



5.2 Class Diagram



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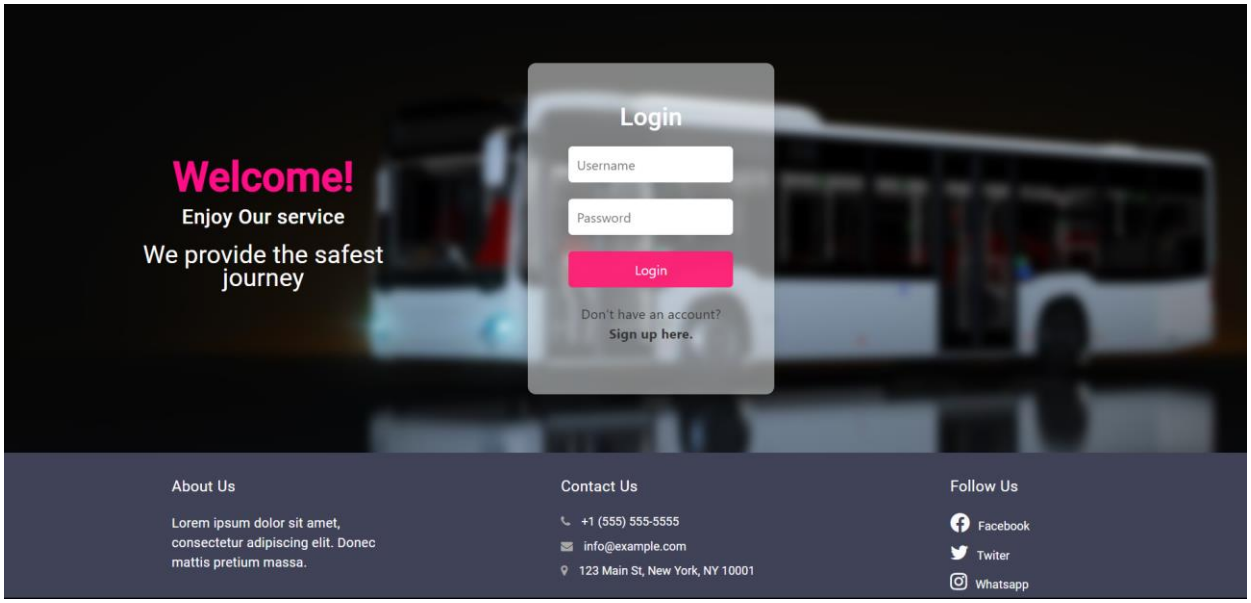
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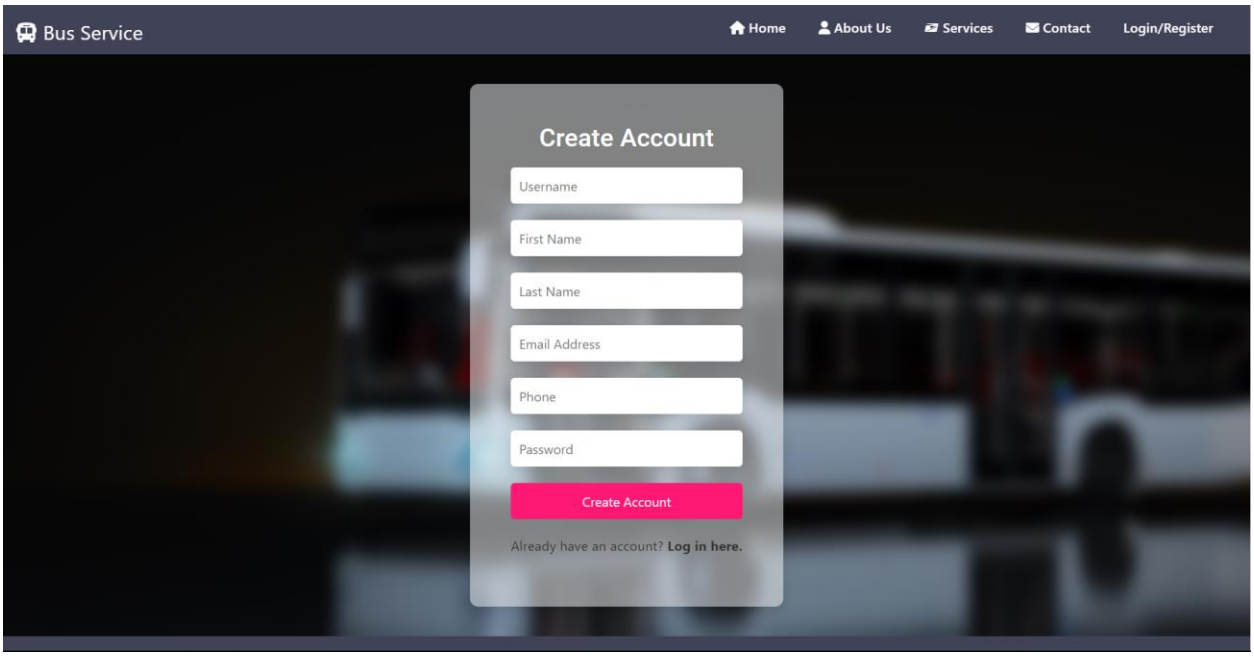
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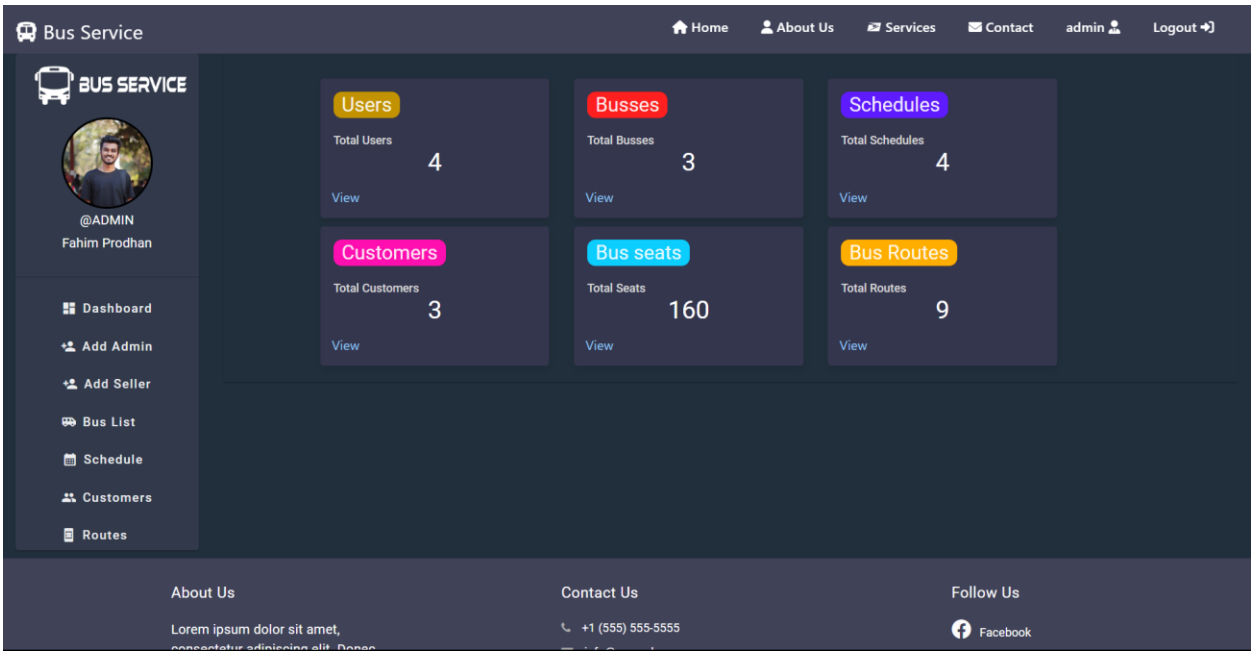
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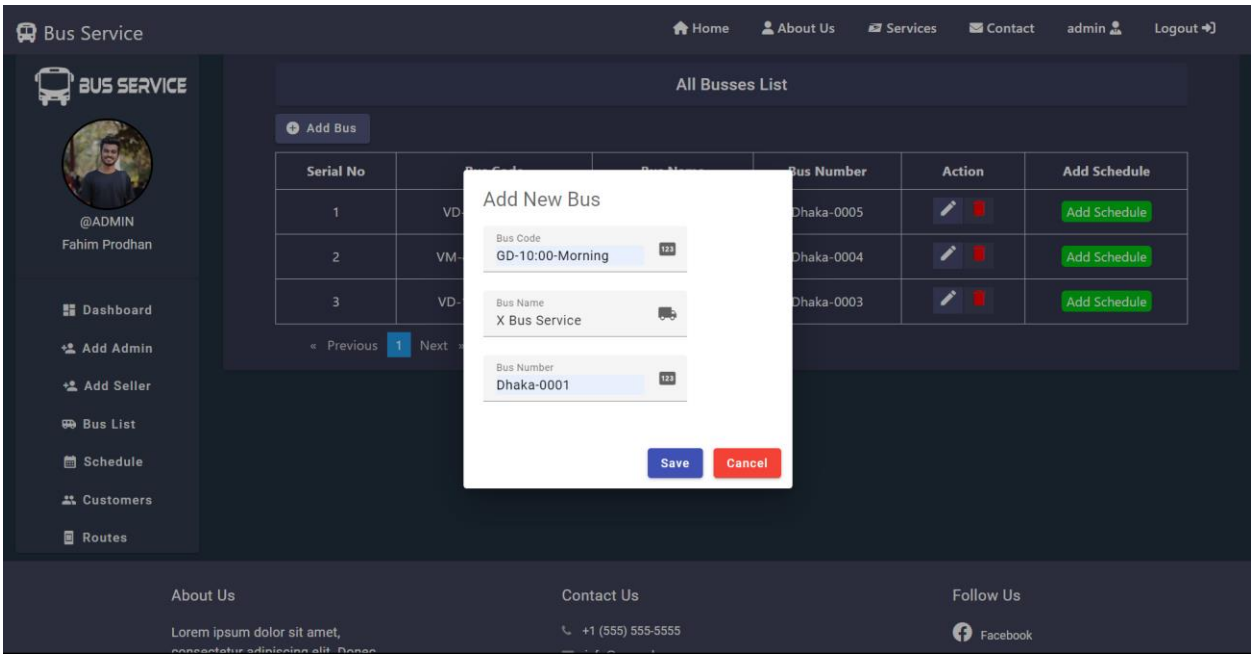
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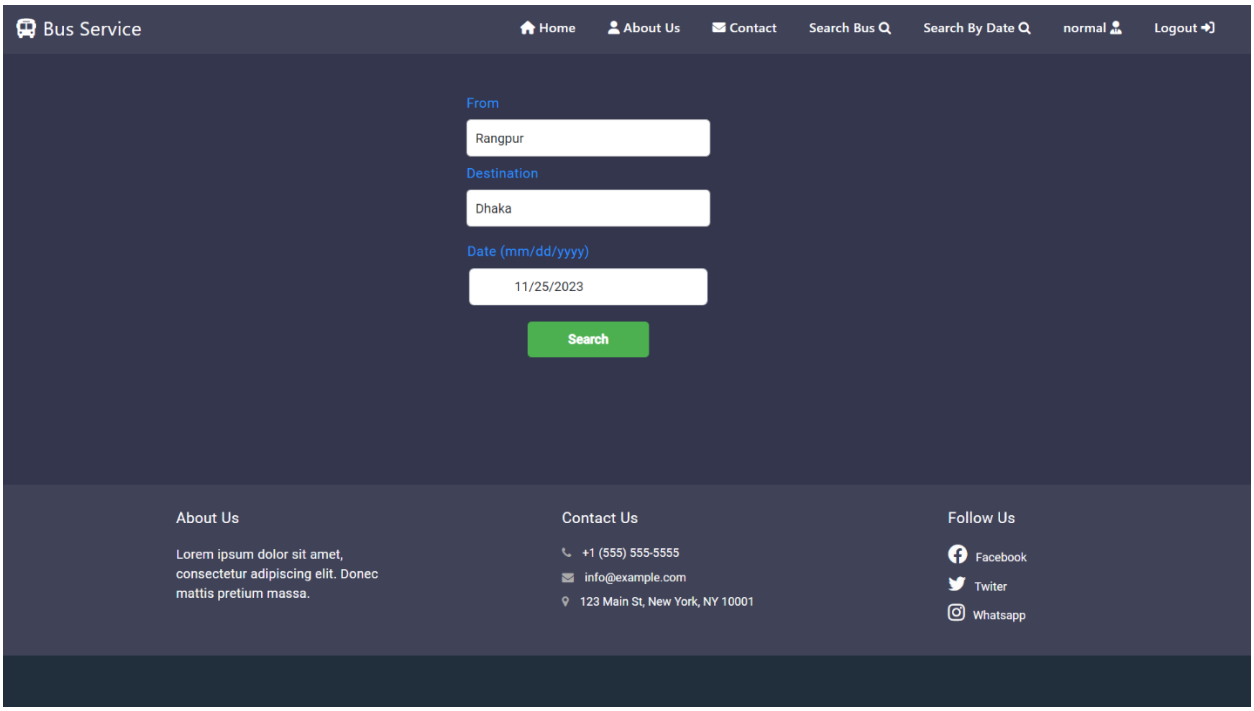
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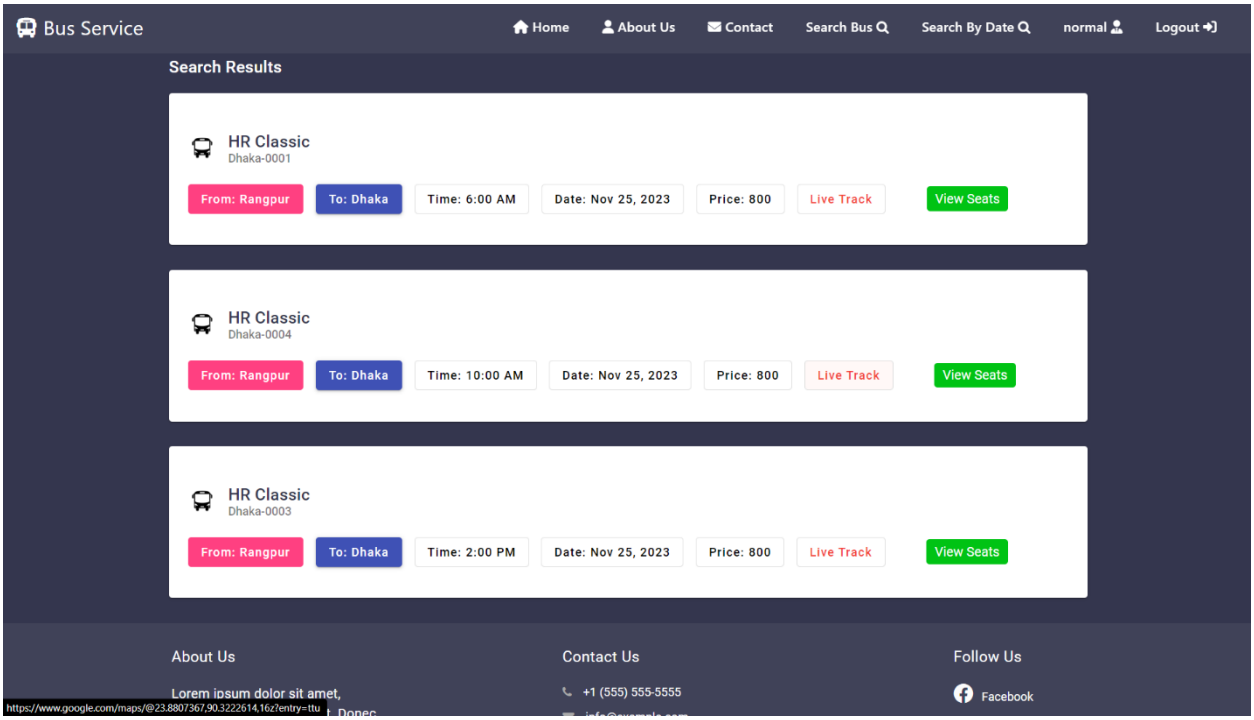
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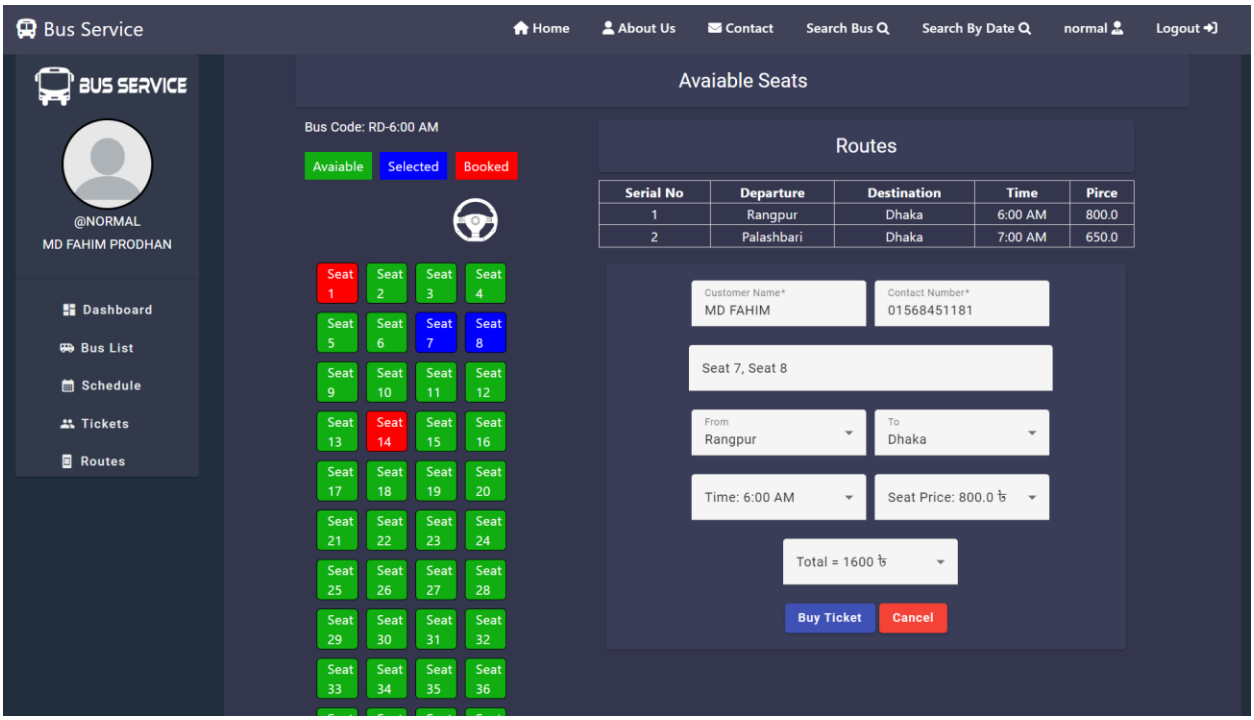
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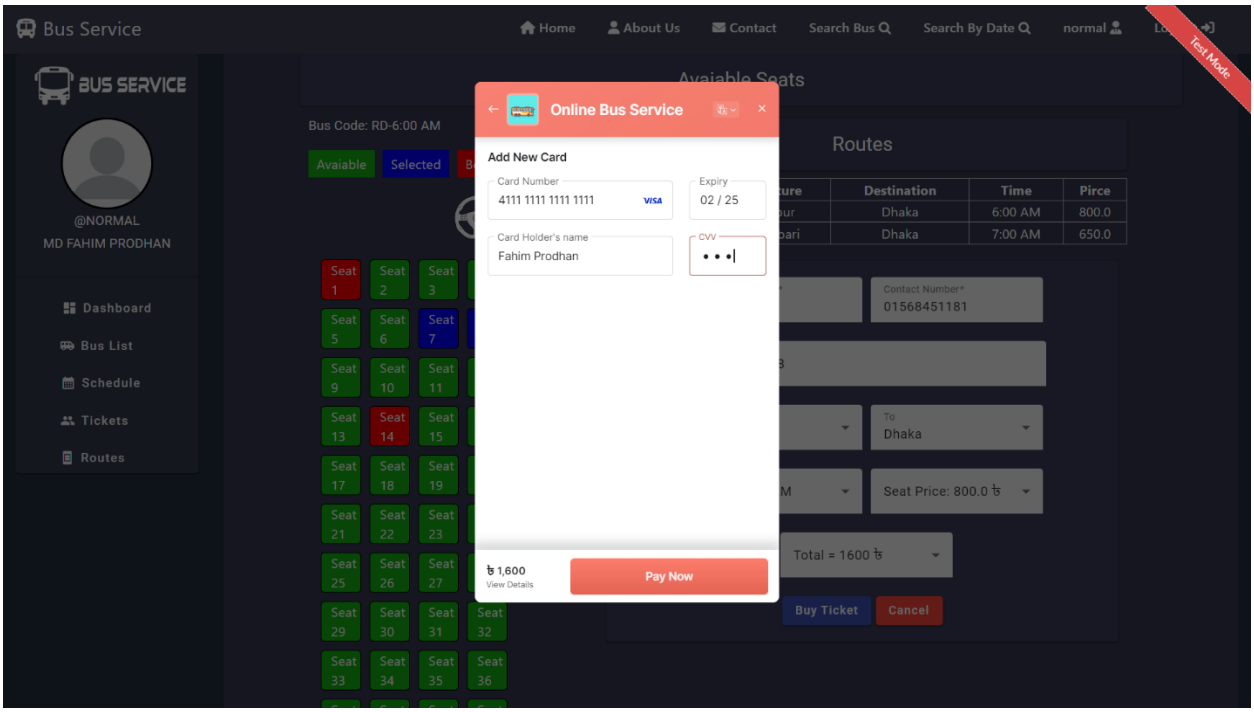
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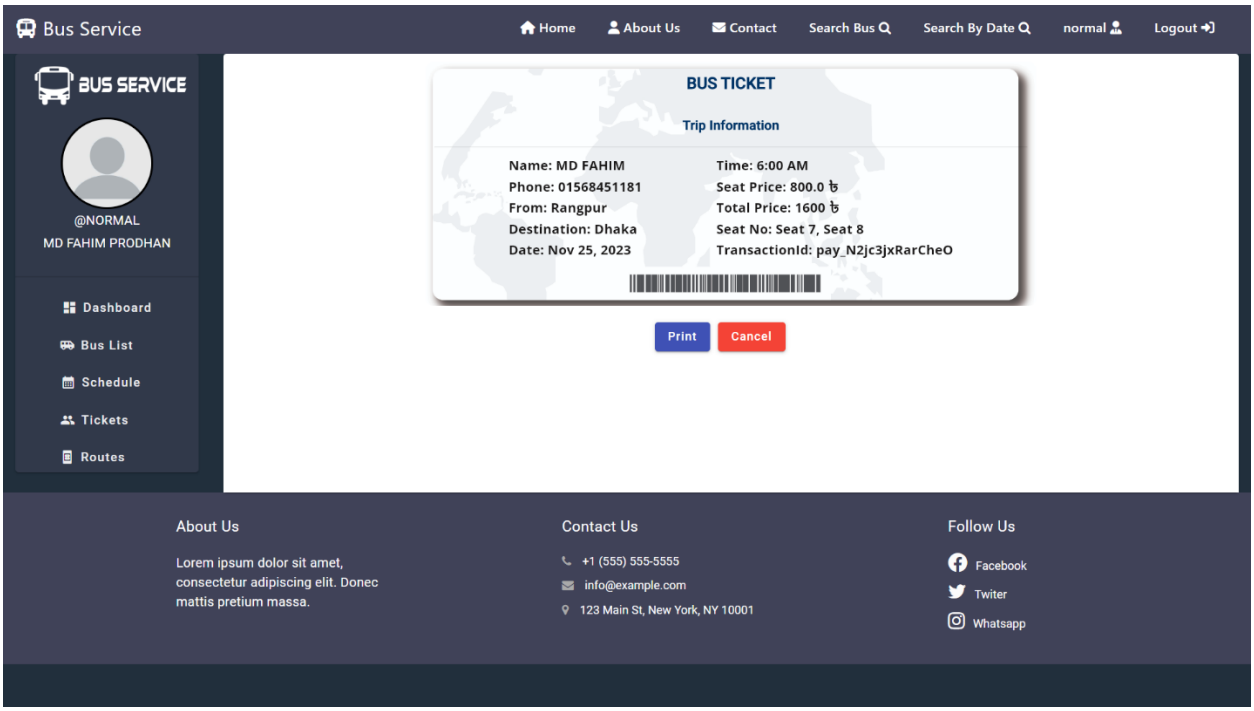

Conclusion:

The bus ticket management system is a web-based application that allows users to search for bus schedules, book tickets, and track the location of their bus. The system is designed to be user-friendly and efficient, and it provides users with a variety of features to make their travel experience easier.