



ROYAL UNIVERSITY OF LAW AND ECONOMIC

BOOK ME BUS SYSTEM

Subject : NET web Programming

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1. Introduction

Objective

- **Purpose:** Simplify bus ticket booking.
- **Features:** Search tickets, passengerDetail.
- **Benefits:** Enhanced convenience and efficiency.

Scope

- **User Registration & Login**
- **Search Tickets**
- **passenger Detail**
- **Payment Processing**



2. Background

Context

- **Current Issue:** Manual booking methods are inefficient.
- **Solution:** Automates booking with real-time information.

Existing Solutions

- **Limitations:** User-unfriendly interfaces and lack of advanced features.
- **Our Solution:** Addresses these gaps with an integrated, user-friendly platform.



3. Challenges and opportunities

Challenges

- **Scalability:** Efficient handling of user load.
- **User Experience:** Designing a straightforward interface.
- **Security:** Safeguarding user data and payments.

Opportunities

- **Integration:** Add travel service expansions.
- **Advanced Features:** Real-time tracking, dynamic pricing.
- **Data Analytics:** Insights from booking data.



4. Functionalities and features

Core Features

- **User Management: Registration, login, password recovery.**
- **Search Tickets: Filter and view bus routes.**
- **Seat Selection: Interactive seat map.**
- **Booking Management: View, modify, cancel bookings.**
- **Payment Processing: Secure transactions.**

Additional Features

- **Email Notifications**
- **User Dashboard**
- **Admin Panel: Route and user management.**




5. UX/UI

Design Principles

- **Simplicity:** Easy navigation and interaction.
- **Consistency:** Uniform design elements.
- **Accessibility:** Inclusive design.

User Flow

- **Registration/Login:** Access to user accounts.
- **Route Search:** Find routes by criteria.
- **Seat Selection:** Choose available seats.
- **Payment:** Secure payment and confirmation.



6. System Design

Architecture

- **Front-End: ASP.NET** for web interface.
- **Back-End: C#** for business logic.
- **Database: SQL Server** for data storage.




7. Back-end functionalities Implementation

Key Functions

- **User Management: Registration and login.**
- **Route Management: CRUD operations.**
- **Booking System: Seat availability and booking logic.**
- **Payment Processing: Payment gateway integration.**

Sample Code

- **User Authentication: C# login code.**
- **Booking Management: C# booking code.**
- **Payment Integration: Example payment processing code.**



8. Technologies

Front-End

- **ASP.NET: Framework for web interfaces.**

Back-End

- **C#: Server-side logic.**
- **SQL Server: Data management.**

Additional Tools

- **Entity Framework: ORM for database operations.**
- **ASP.NET Identity: User authentication.**



9. Summery

Overview

- **Solution:** Comprehensive online bus ticket booking system.
- **Features:** User-friendly with robust back-end management.

Future Directions

- **Improvements:** Mobile apps, additional payment methods, advanced analytics.

Appendices

- **Database Schema:** SQL scripts.
- **Code Samples:** Key snippets.
- **Wireframes and Mockups:** Design assets.