



ONLINE BUS RESERVATION SYSTEM (OBRS) — DOCUMENTATION

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Table of Contents

ONLINE BUS RESERVATION SYSTEM (OBRS) – DOCUMENTATION	1
1. Introduction	3
2. Objectives.....	3
3. System Architecture.....	4
4. Project Flow	5
5. Database Design	6
6. Features	7
7. Technology Stack	9
8. Dashboard & Reports	10
9. Future Enhancements	11
10. Project Screenshots.....	11
11. Conclusion.....	14



1. Introduction

The Online Bus Reservation System (OBRS) is a web-based application built using ASP.NET Core MVC with Entity Framework Core and SQL Server as the database.

It provides users the ability to:

- Search for available buses
 - View routes and fares
 - Book tickets online
 - Manage bookings
- And admins can:
- Manage buses, routes, and fares
 - Monitor reservations
 - Update booking statuses

2. Objectives

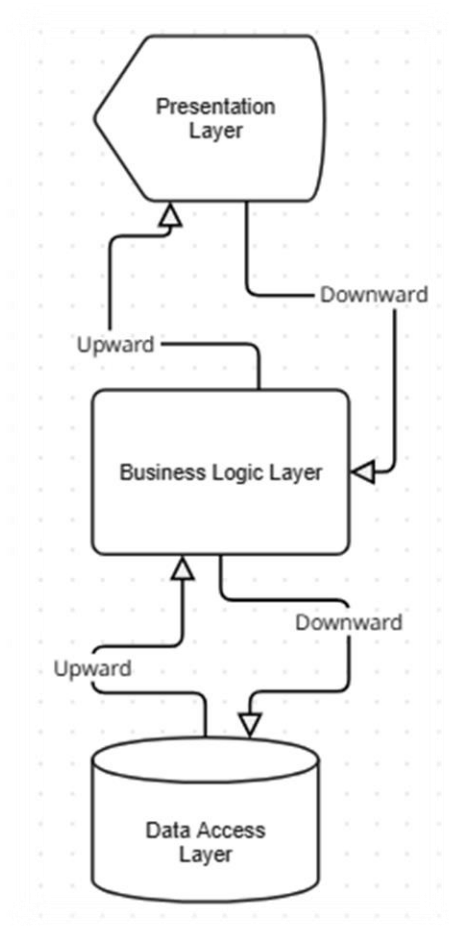
- Provide an online platform for easy and fast bus reservations.
- Reduce manual work for booking counters.
- Ensure real-time availability of seats.
- Provide admin with a dashboard for revenue and booking management.



3. System Architecture

This system follows a 3-Tier Architecture:

1. Presentation Layer – ASP.NET MVC Views
2. Business Logic Layer – Controllers and Services
3. Data Access Layer – Entity Framework Core + SQL Server

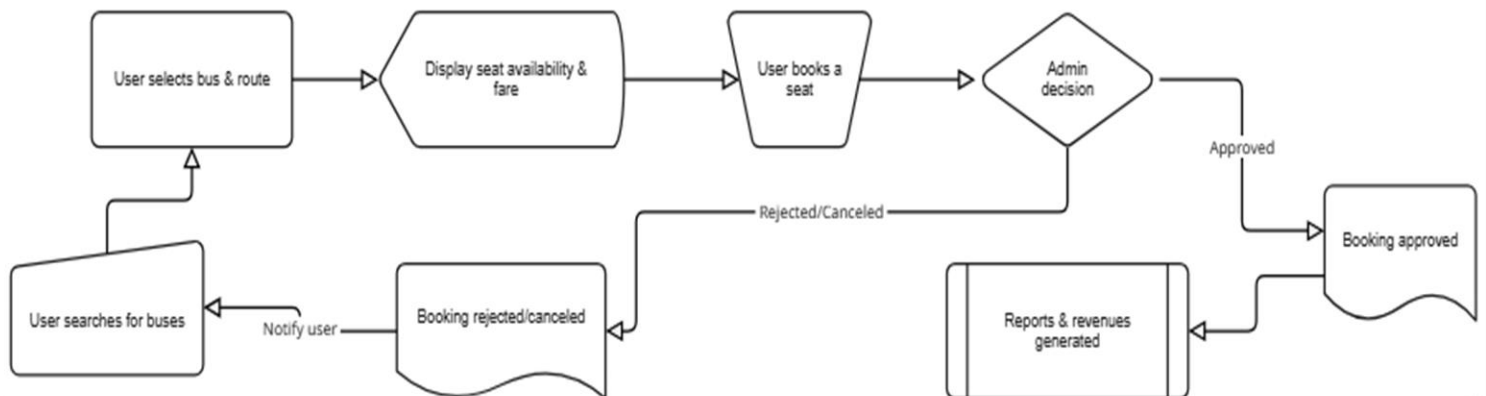




4. Project Flow

The overall flow of the project is as follows:

1. User searches for buses.
2. User selects a bus & route.
3. System displays seat availability and fare.
4. User books a seat (confirmation + payment).
5. Admin can approve/reject/cancel bookings.
6. Reports & revenues generated.

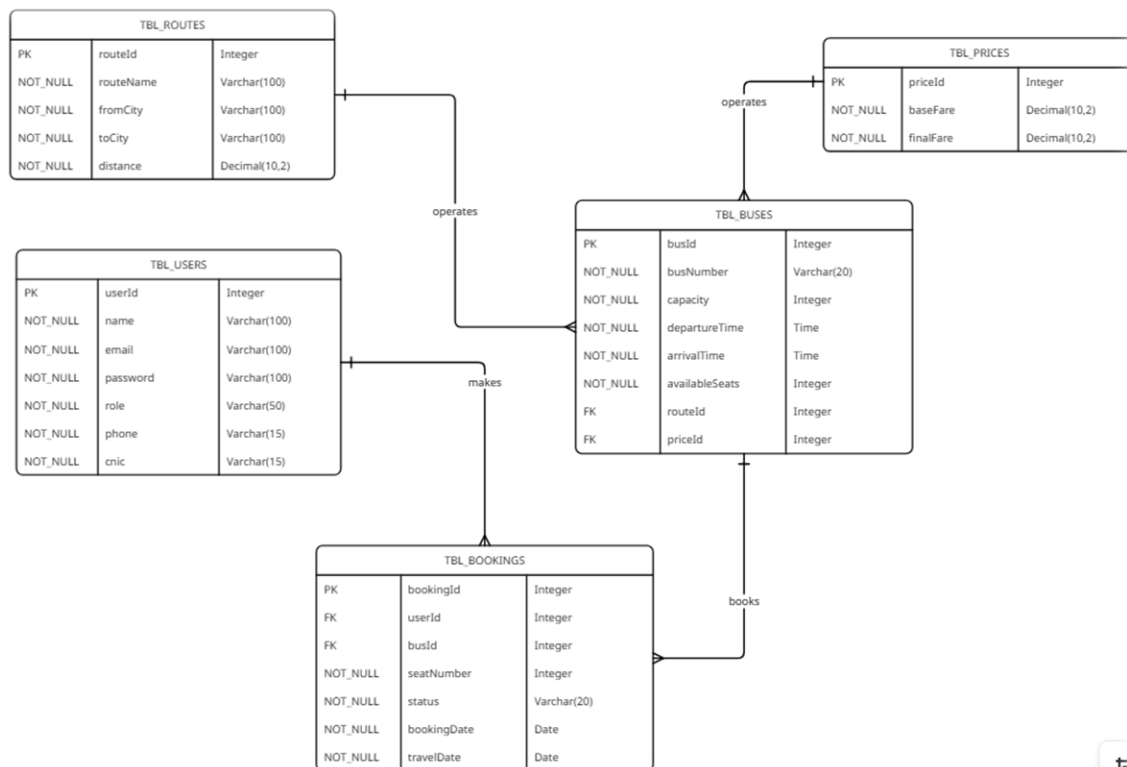




5. Database Design

Main Tables:

- **tbl_users** → stores user details
- **tbl_buses** → stores bus info (Bus No, Capacity, etc.)
- **tbl_routes** → route info (From, To, Distance, etc.)
- **tbl_prices** → stores fare (Base Fare, Final Fare)
- **tbl_bookings** → stores booking details (User, BusId, Seat, Status, Date, etc.)





6. Features

For Users

- Search buses by route/date
- View seat availability
- Book tickets online
- View booking history
- Cancel bookings

For Admins

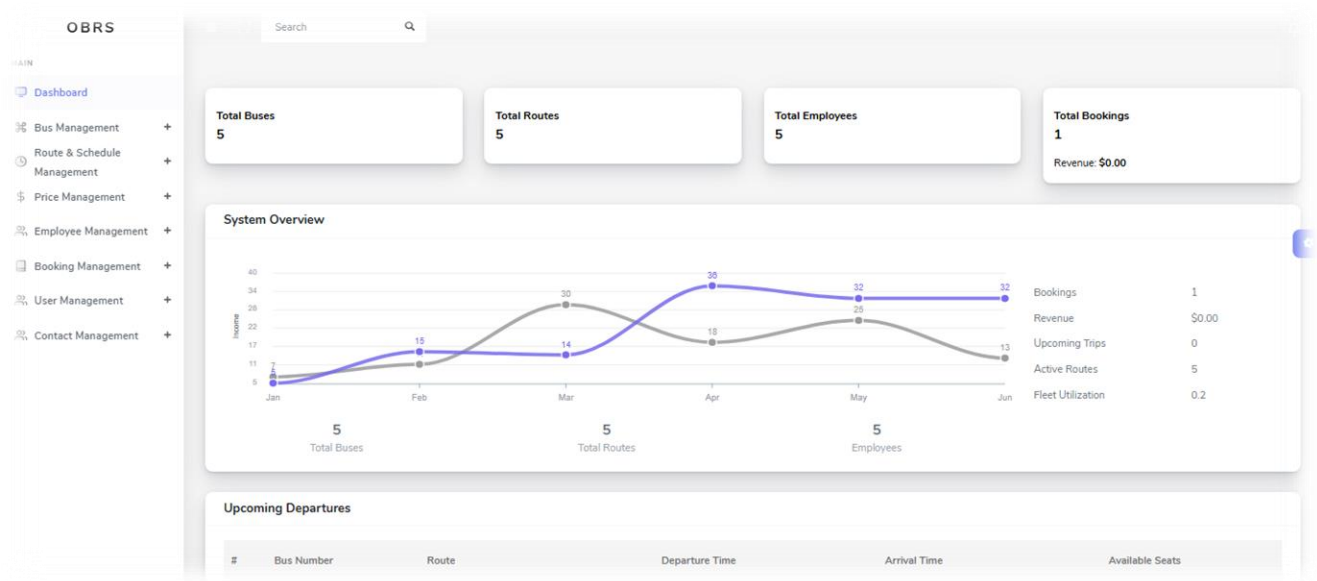
- Add/Edit/Delete buses
- Add/Edit/Delete routes
- Manage fares
- Manage bookings (approve, cancel, complete)
- Dashboard with revenue summary

✦ *Insert screenshots of key pages here:*

- ![User Booking Screen]



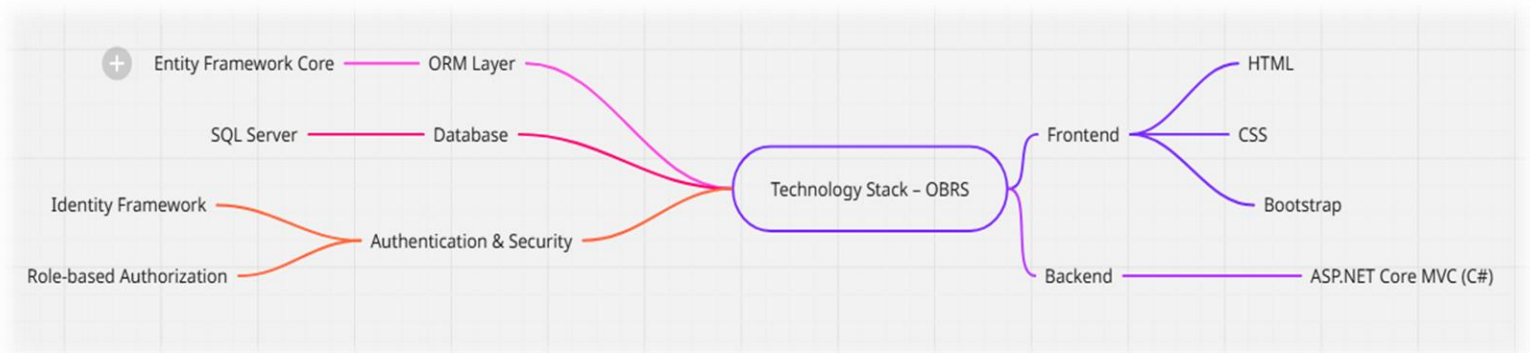
- ![Admin Dashboard]





7. Technology Stack

- Frontend: HTML, CSS, Bootstrap
- Backend: ASP.NET Core MVC (C#)
- Database: SQL Server
- ORM: Entity Framework Core
- Authentication: Identity (with Role-based Authorization)

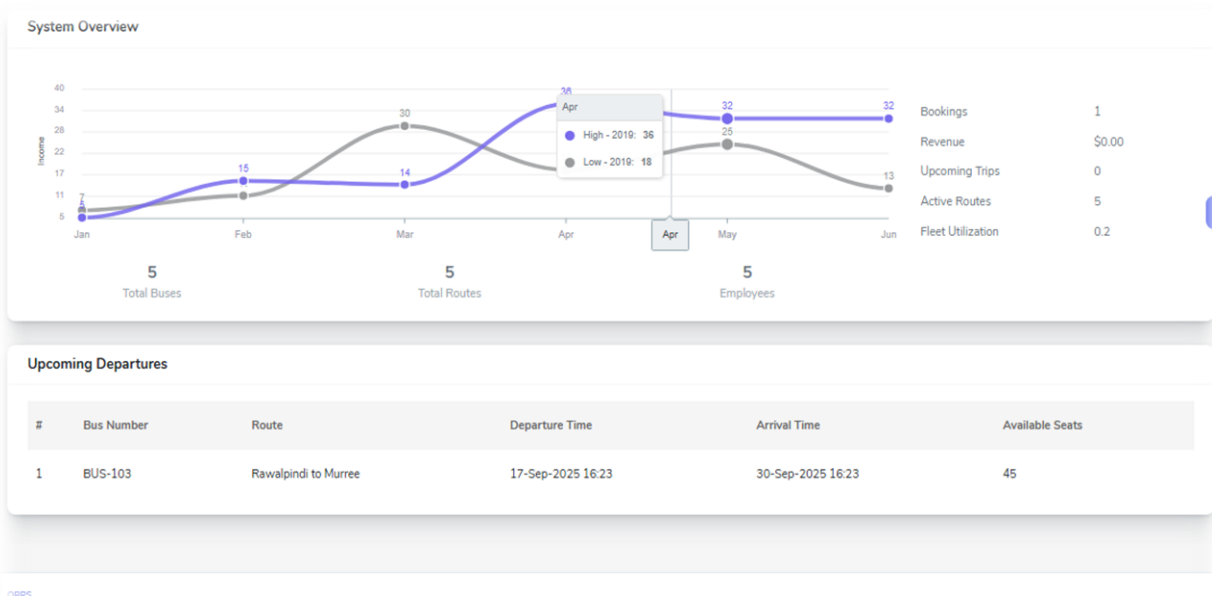




8. Dashboard & Reports

Admin dashboard provides:

- Total Bookings
- Revenue Generated
- Upcoming Departures
- Payment Summaries



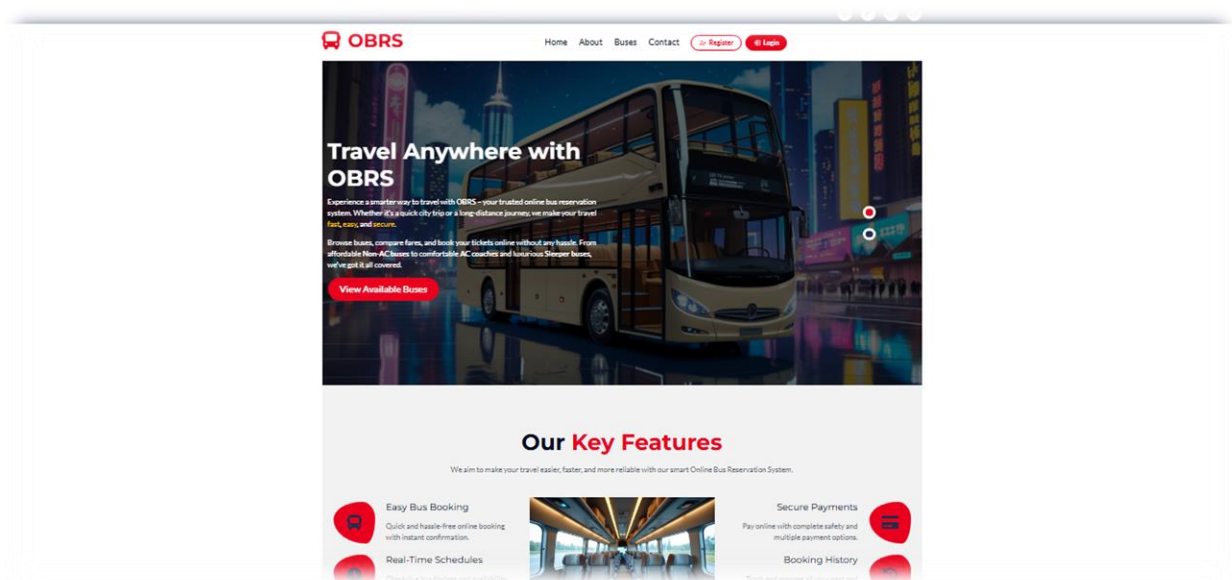


9. Future Enhancements

- Online Payment Gateway (JazzCash/EasyPaisha/Stripe)
- Email/SMS Notifications
- Mobile App (Xamarin / React Native)
- Real-time seat locking system

10. Project Screenshots

- Home Page →





- Booking Page →

OBRS

Home About Buses Contact Booking History hammad Logout Reserve Now

Create Booking

PassengerName
Enter full name

PassengerCNIC
Enter CNIC

PassengerPhone
Enter phone number

Bus
Green Line

Price Per Seat (PKR)
1,500.00

Route Fare (PKR)
850.00

Total Fare (PKR)
2,350.00

SeatNumber
-- Select Seat --

TravelDate
09/16/2025

Book Now Cancel

↑



- **Payment Summary** →

My Bookings

Bus	Route	Seat	Fare	Travel Date	Booking Date	Status
BUS-101	Karachi to Hyderabad	10	Rs. 2,350.00	09 Sep 2025	09 Sep 2025	Booked

About OBRS
The Online Bus Reservation System makes it easy to book tickets, manage routes, and track schedules securely and efficiently.

Quick Links
[About](#)
[Buses](#)
[Bookings](#)
[Contact](#)

Business Hours
 Mon - Fri: 09:00 am - 07:00 pm
 Saturday: 10:00 am - 05:00 pm
 Sunday: Closed

Contact Info
 Karachi, Pakistan
bus.obrs@gmail.com
[+92 325 446 308](tel:+92325446308)

- **Manage Buses (Admin)** →

Buses

#	Bus Number	Bus Name	Bus Route	Bus Image	Bus Type	Total Seats	Available Seats	Departure	Arrival	Price	Status	Action1	Action2
1	BUS-101	Green Line	Karachi to Hyderabad		AC	34	34	2025-09-09 16:21	2025-09-10 16:21	\$1,500.00	Active	Update	Delete
2	BUS-102	Sky Travels	Lahore to Islamabad		AC	45	45	2025-09-12 16:22	2025-09-16 16:22	\$900.00	Active	Update	Delete
3	BUS-103	City Liner	Rawalpindi to Murree		Sleeper	45	45	2025-09-17 16:23	2025-09-30 16:23	\$1,400.00	Active	Update	Delete
4	BUS-104	Royal Coach	Lahore to Faisalabad		Sleeper	54	54	2025-09-10 16:25	2025-09-27 16:25	\$850.00	Active	Update	Delete
5	BUS-105	Speed Line	Peshawar to Swat		AC	45	45	2025-09-11 16:26	2025-09-30 16:26	\$1,400.00	Active	Update	Delete

[+ Add Buses](#)

Navigation: Dashboard, Bus Management, Route & Schedule Management, Price Management, Employee Management, Booking Management, User Management, Contact Management



- Manage Bookings (Admin) →

OBRS

Search

Dashboard

Bus Management +

Route & Schedule Management +

Price Management +

Employee Management +

Booking Management +

User Management +

Contact Management +

Manage Bookings

#	Passenger	CNIC	Phone	Bus & Route	Seat	Fare (PKR)	Travel Date	Booking Date	Status	Update	Delete
1	hammad	35205-9998877-6	03001234567	BUS-101 - Karachi to Hyderabad	10	850.00	09-Sep-2025	09-Sep-2025	Booked	Update	Delete

< 1 2 3 >

11. Conclusion

The Online Bus Reservation System provides a seamless platform for bus operators and passengers. It automates the entire process of searching, booking, and managing tickets.

It saves time, reduces errors, and increases operational efficiency.