

Railway Reservation System - Presentation & Setup Guide

1. Project Overview

The Railway Reservation System is a C# ADO.NET application that simulates a train ticket booking platform similar to IRCTC. It includes modules for both admin and user operations with features like train management, seat availability tracking, booking and cancellation with refunds, live status updates, PDF ticket generation, reporting, and restrictions for past-date bookings.

2. Key Features

- Admin: Add/remove trains (soft delete), view live seat availability, cancel user bookings (100% refund), view all bookings, cancellations, generate reports (transactions, revenue), specify cancellation reasons.
- User: Register, view trains & availability, book tickets (with PDF receipt), cancel bookings (refund as per rules), view PNR status.
- Booking restrictions: No past-date bookings allowed.
- Ticket PDF: Plain ASCII table format similar to IRCTC.
- Live seat availability updates on booking & cancellation.

3. Setup Instructions

1. Install Microsoft SQL Server and SQL Server Management Studio (SSMS).
2. Create a new database in SQL Server.
3. Run the provided SQL schema script (`SQL/schema.sql`) to create required tables and insert initial data.
4. Open the project solution (.sln) in Visual Studio.
5. In `DatabaseConnection.cs`, replace the empty connection string in:

```
SqlConnection con = new SqlConnection("");
```


with your SQL Server connection string.
6. Build the project in Visual Studio.
7. Run the application.

4. Presentation Tips

- Start with the project problem statement and why such a system is needed.
- Walk through the user flow: registration -> booking -> PDF ticket -> cancellation -> refund.

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- Demonstrate admin features: adding trains, cancelling bookings, viewing reports.
- Highlight the technical stack: C#, ADO.NET, SQL Server.
- Explain database structure briefly (tables for trains, classes, reservations, cancellations, reports).
- End with the benefits and possible future enhancements (e.g., online payment, seat preference selection).