Railway Reservation System - Presentation & Setup Guide

1. Presentation Flow (Slide List)

1. Title Slide: Railway Reservation System
2. Problem Statement & Objective
3. Technology Stack (C#, ADO.NET, SQL Server)
4. System Architecture Diagram
5. Database Design (Tables & Relationships)
6. Admin Features Overview
7. User Features Overview
8. Live Seat Availability Logic
9. Booking Process Flow
10. Cancellation & Refund Rules
11. Reports & Revenue Calculation
12. Demo Screenshots (Admin & User)
13. Security & Validation Features
14. Future Enhancements
15. Conclusion & Q&A

2. Common Questions & Model Answers

Q1: How does the system prevent booking for past dates?

A1: The booking function checks the selected date against the current system date, and rejects if it's earlier.

Q2: How is live seat availability maintained?

A2: After each booking or cancellation, the corresponding class seat count is updated in the database and immediately reflected in queries.

Q3: What happens when an admin cancels a user booking?

A3: The seat is released, 100% refund is processed, and the reason for cancellation is recorded.

Q4: How is soft delete implemented for trains?

A4: A status flag (Active/Inactive) is updated instead of deleting the row, so historical booking data remains

intact.

Q5: How are refunds calculated for user cancellations?

A5: Refund percentage is based on defined business rules (e.g., before 24 hrs = full refund, within 24 hrs = partial refund).

Q6: Can the system generate reports for a specific customer?

A6: Yes, admin can filter bookings and cancellations by customer details.

Q7: How is the ticket PDF generated?

A7: The system uses a plain text table format without Unicode graphics to ensure compatibility.

Q8: Why is a single connection method used?

A8: To centralize connection handling, reduce code duplication, and make future changes easier.