

# **Data Base Systems Lab**

## **Group Members:**

**Muhammad Hassan Javed 22I6567**

**Afaq khaliq 22I6939**

**Maaz Khan**

**Faseeh Ur Rahman**

## **Railway Management System:**

### **Project Description:**

The Railway Management Database project is designed to revolutionize railway operations by introducing a comprehensive and efficient database system. This system will streamline passenger reservations, manage train schedules, handle ticketing and fare calculations, maintain passenger information, and optimize inventory management.

### **Functionalities:**

#### **Automated Reservation System**

- **User Registration and Authentication:** Allow users to create accounts, log in securely, and manage their profiles.
- **Train Availability Search:** Enable passengers to search for available trains based on criteria such as origin, destination, date, and class

#### **Train Schedule Management**

- **Real-time Schedule Updates:** Allow administrators to update and manage train schedules, with real-time updates for passengers.
- **Search and Display:** Provide passengers with an easy-to-use interface to search for train schedules based on various criteria

### **Ticketing and Fare Management**

- **Fare Calculation:** Implement a fare calculation system based on factors like distance, class, and additional services.

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### **Passenger Information System**

- **Profile Management:** Allow passengers to update and manage their personal information and preferences.
- **Booking History:** Provide a history of past reservations and travel details for each passenger.

### **Inventory Management**

- **Train and Coach Management:** Track the availability, maintenance schedule, and status of trains and coaches.

## **Technologies**

- **Database Management System:** MS SQL
- **Backend Development:** Node.js with Express.js
- **Frontend Development:** html/css bootstrap
- **Version Control:** Git/GitHub