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CSE-A

CASE STUDY

ONLINE RAILWAY RESERVATION SYSTEM

AIM: The Online Railway Reservation System simplifies train ticket booking, schedules, and reservation management. Its user-friendly platform enables users to search for trains, book tickets, complete secure payments and receive instant confirmation.

DESCRIPTION: The Online Railway Reservation System is an online application that provides the following key functionalities:

1. **User Registration and Authentication:** The system allows users to securely register and log in, ensuring the privacy and security of their accounts.
2. **Train Search:** Users can effortlessly search for trains by specifying criteria such as source and destination, travel date, and class of service.
3. **Ticket Booking:** Users can select a train, specify the number of passengers, and proceed with ticket booking. The system validates seat availability and displays fare details.
4. **Payment Processing:** For user convenience, the system supports multiple payment methods, including credit/debit cards, net banking, and digital wallets.
5. **Ticket Confirmation:** After completing the payment process, users instantly receive confirmation of their reservations and a unique PNR (Passenger Name Record) number.
6. **Ticket Cancellation:** Users can request ticket cancellations while adhering to the system's cancellation rules and associated charges.

7. **User Profile Management:** Users can conveniently manage their profiles, access booking history, and update personal information.
8. **Admin Panel:** Administrators are granted access to an admin panel for tasks such as managing train schedules, adding new trains, and monitoring user activity.

Tables Required with Descriptions:

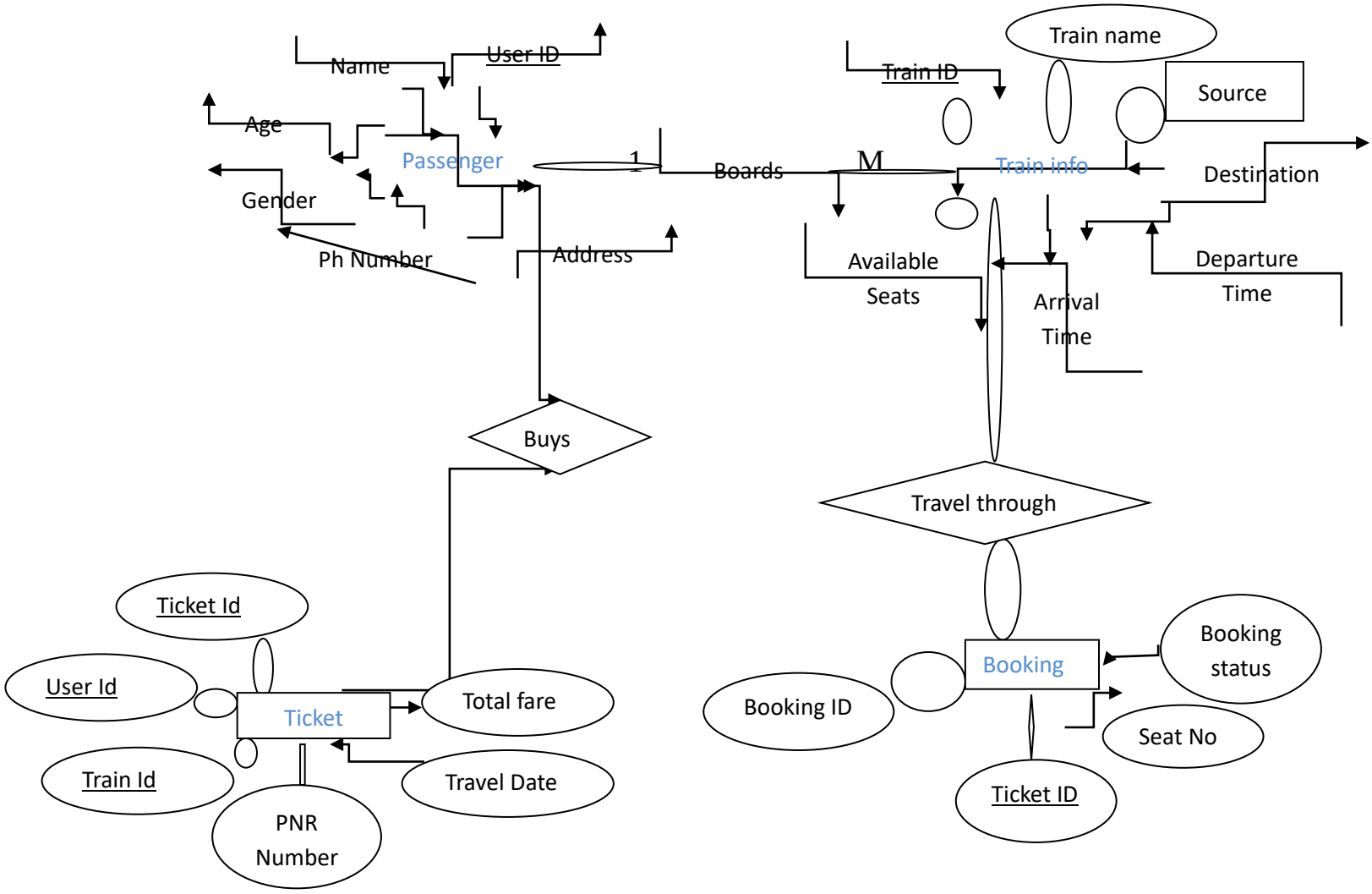
1. **User Table:**
    - User ID (Primary Key)
    - Username
    - Age
    - Gender
    - Phone Number
    - Residential Address
2. **Train Table:**
    - Train ID (Primary Key)
    - Train Name
    - Source Station
    - Destination Station
    - Departure Time
    - Arrival Time
    - Total Available Seats
3. **Ticket Table:**
    - Ticket ID (Primary Key)
    - User ID (Foreign Key)

- Train ID (Foreign Key)
- PNR Number
- Travel Date
- Total Fare

4. **Booking Table:**
    - Booking ID (Primary Key)
    - Ticket ID (Foreign Key)
    - Seat Number
    - Booking Status (Booked, Cancelled, etc.)

E-R Diagram:

Diagram:



RELATIONAL DATABASE SCHEMA :