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CSE - O

**RAILWAY MANAGEMENT SYSTEM**

**Aim:**

The aim of the Railway Management System is to efficiently manage and organize railway operations, including information about trains, passengers, reservations, ticketing, and other relevant data.

**Description:**

The Railway Management System typically includes the following components:

**Train Information**: Stores information about the trains, such as train name, departure and arrival stations, schedule, and seat availability.

**Passenger Information**: Contains details about passengers, including name, contact information, and ID.

**Reservation Management:** Manages passenger reservations, including reservation ID, passenger ID, train ID, and seat information.

**Ticketing and Payment**: Tracks ticket information, including the reservation, fare, and payment details.

**Station Information:** Stores information about railway stations, their names, and location details.

**Employee Information:** Manages information about railway staff, such as station managers and ticketing agents.

**Tables Required with Description:**

**Train Table:**

Train\_ID (Primary Key)

Train\_Name

Departure\_Station

Arrival\_Station

Departure\_Time

Arrival\_Time

Total\_Seats

Available\_Seats

**Passenger Table:**

Passenger\_ID (Primary Key)

Name

Contact\_Number

Address

**Reservation Table:**

Reservation\_ID (Primary Key)

Passenger\_ID (Foreign Key)

Train\_ID (Foreign Key)

Seat\_Number

Date

**Ticket Table:**

Ticket\_ID (Primary Key)

Reservation\_ID (Foreign Key)

Fare

Payment\_Status

**Station Table:**

Station\_ID (Primary Key)

Station\_Name

Location

**Employee Table:**

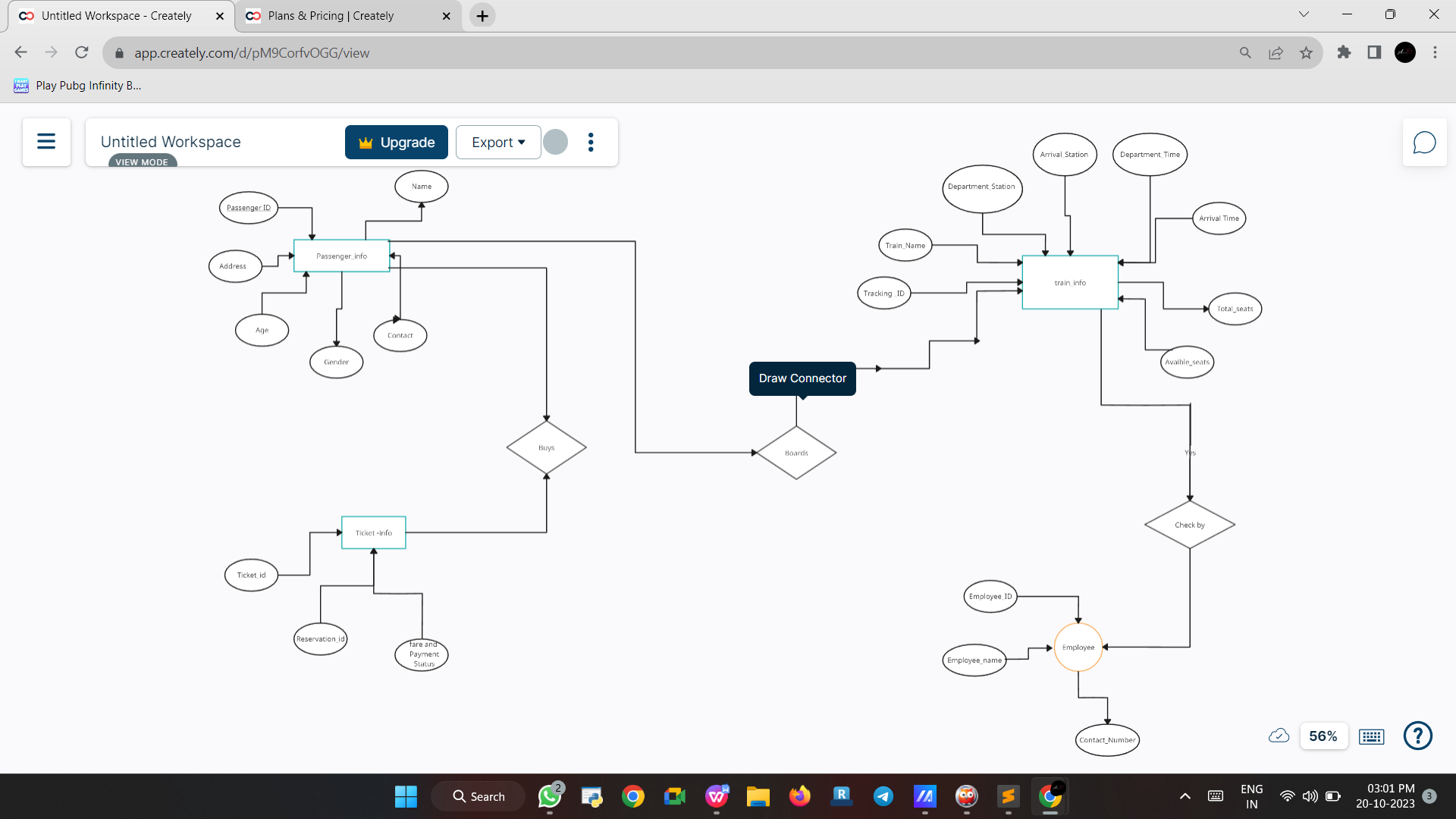
Employee\_ID (Primary Key)

Name

Position

Contact\_Number

**E.R Diagram:**



**Relational\_Schema:**

**Train Table:**

**Train\_ID (Primary Key)**: A unique identifier for each train.

**Train\_Name:** The name of the train.

**Departure\_Station**: The station where the train starts its journey.

**Arrival\_Station:** The station where the train ends its journey.

**Departure\_Time:** The time when the train departs from the departure station.

**Arrival\_Time:** The time when the train arrives at the arrival station.

**Total\_Seats:** The total number of seats on the train.

**Available\_Seats:** The number of seats that are currently available on the train.

**Passenger Table:**

**Passenger\_ID (Primary Key):** A unique identifier for each passenger.

**Name:** The name of the passenger.

**Contact\_Number:** The contact number of the passenger.

**Address:** The address of the passenger.

**Reservation Table:**

**Reservation\_ID (Primary Key):** A unique identifier for each reservation.

**Passenger\_ID (Foreign Key):** Links to the Passenger table to associate reservations with passengers.

**Train\_ID (Foreign Key):** Links to the Train table to specify which train the reservation is for.

**Seat\_Number:** The seat number reserved by the passenger.

**Date:** The date of the reservation.

**Ticket Table:**

**Ticket\_ID (Primary Key):** A unique identifier for each ticket.

**Reservation\_ID (Foreign Key):** Links to the Reservation table to associate tickets with reservations.

**Fare:** The cost or fare for the reservation.

**Payment\_Status:** Indicates whether the payment for the ticket has been made or not.

**Station Table:**

S**tation\_ID (Primary Key):** A unique

identifier for each station.

**Station\_Name:** The name of the station.

**Location:** The location or address of the station.

**Employee Table:**

**Employee\_ID (Primary Key):** A unique identifier for each employee.

**Name:** The name of the employee.

**Position:** The job position or role of the employee.

**Contact\_Number:** The contact number of the employee.