**PROJECT**

**ANP-C7971**

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**Database Design for**

**Railway Management System**

Railway Management System(RMS):

A Railway Management System (RMS) is designed to streamline and manage various operations related to the railway network. The system handles a variety of tasks such as scheduling, ticketing,seating, train and station management, employee records, and maintenance logs. It ensures efficient communication between trains, stations, and passengers, enabling the smooth operation of railway services. This project showcases a simplified database management system (DBMS) for railways, highlighting key aspects like train operations, station details, scheduling, ticketing, employee management, and maintenance records,seats.

**Relationships Overview**:

The proposed Railway Management System is centered around five major tables:

* **Trains:** Contains details of the trains such as type, capacity, and train numbers.
* **Stations:** Holds information about various railway stations, including their location.
* **Schedules:** Manages the arrival and departure timings of trains at different stations.
* **Tickets:** Stores the details of passenger tickets, including seat numbers, prices, and train allocation.
* **Employees:** Tracks the employees working in different positions and stations.
* **Maintenance Record:** Keeps logs of maintenance activities performed on trains.
* **Seats**: allocation of seats to passengers.

**ENTITIES:**

* Trains
* Stations
* Schedules
* Tickets
* Employees
* Maintenance Record
* Seats

**ENTITIES & ATTRIBUTES:**

1.Trains

Attributes:

* train\_id (Primary Key)
* train\_number
* type
* capacity

2. Stations

Attributes:

* station\_id (Primary Key)
* station\_name
* location

3. Schedules

Attributes:

* schedule\_id (Primary Key)
* train\_id (Foreign Key)
* station\_id (Foreign Key)
* arrival\_time
* departure\_time

4. Tickets

Attributes:

* ticket\_id (Primary Key)
* train\_id (Foreign Key)
* passenger\_name
* seat\_number
* price

5. Employees

Attributes:

* employee\_id (Primary Key)
* name
* position
* station\_id (Foreign Key)

6. Maintenance Record

Attributes:

* record\_id (Primary Key)
* train\_id (Foreign Key)
* maintenance\_date
* description

7.Seats

Attributes:

* seat\_id (Primary Key)
* train\_id (Foreign Key)
* seat\_number
* class
* availability

Entity & Relationship Diagram:

of

STATIONS

EMPLOYEES

TRAINS

SCHEDULES

MAINTENANCE RECORD

provides

Based on

have

Consists

for

TICKETS

SEATS

ENTITY DIAGRAM:

