

**DATABASE PROJECT:**

**RAILWAY TICKET RESERVATION SYSTEM**

**SUBMITTED BY:**

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**SUBMITTED TO:**

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**DELIVERABLE 1:**

**Textual Description**

A railway ticket reservation system consists of multiple **stations**. Each station has exactly one **administrator** that manages it’s **operation** and checks on the staff, where each staff member has exactly one **designation** allocated to it. Whereas each station has multiple **routes**, Each Route assigns multiple **trains** of unique id, name running on it on different **time slots**. Each route is associated with a specific expenditure related to it based on staff allocated, route length, and train type. All the stations have their list of expenses along with the total sale of tickets. A train have many seats inside it, whereas each seat has exactly one ticket allotted to it. A **customer** may purchase multiple tickets after creating it's own account. Each customer has it’s history that may be accessed on any station. Also, a customer can book a return ticket, or simply book a ticket from another city few days prior to departure. The schedule is listed to customer of the three days and all the customer’s billing record is stored per its profile.

Salient Features of the system.

* Database doesn’t allow bogus entries.
* No record is redundant on any station.
* Each station’s record is available to every other station.
* The profit/loss is calculated and ranked per se.
* Database doesn’t allow conflict of schedule or tickets.
* Database keeps track of sold and unsold seats.
* Database ensures no redundant record is stored.
* Database checks for any errors in the records itself as to avoid any input error.

**Project Theme:**

This database project will be able to perform train ticket reservation. Passenger can book his/her ticket from on/offline both modes. For online reservation passenger should contact to the relevant department and give his/her required details. Reservation desk should store passenger’s details into the system and let him/her know the further proceedings. Offline mode is like a traditional mode from where the passenger should visit the registration desk physically and book his/her ticket depending upon the availability of train. Reservation desk after collecting all information of passenger should reserve passenger/s seat/s.

The project will be able to store all the required information of passengers, admin, train type, route, cost, employee, designation, seat, schedule and ticket.

**Passenger:**

Passenger needs to provide his details like cnic, name, phone number, email, gender, dob, address to reserve seat in the train. After providing this information, passenger will be provided by the information of further proceedings.

**Admin:**

Admin needs to provide his details like cnic, name, phone number, email, gender, dob, username, password.

**Train Type:**

Each train has a id and name. It’s model and no of seats. Trains in this project have categorized into different categorize that is economy, second class and business class. Passenger/s has a choice to select any of them.

**Route:**

Every route has a source and destination. Passenger should let the reservation department the source and destination of him/her.

**Cost:**

After selecting the route, Train type, the passenger will be able to know his destination fare.

**Employee:**

Every employee involved in this process should provide his/her details to keep the system efficient and updated. Details included are cnic, name, phone number, gender, email, dob, address, train station, train id, designation.

**Designation:**

Every employee has a specific designation. By putting their id/name/salary into the system, we can find their designation. Designation ranks involved in this project are driver, conductor, staff, guard.

**Seat:**

Every seat has it’s seat number, train id, train name.

**Schedule:**

Every train has a specific schedule. Cost, route, leaving time, arrival time, train id, train name are participants of schedule.

**Ticket:**

Ticket is given to passenger by the reservation desk after getting all information and costs.

All these entities are somehow inter linked with each other to perform task. All data is stored in database for further use. Once the passenger is enrolled in the system, he/she doesn’t need to provide his/her information for next time. This project will be efficient and precious time of passenger/s will be saved.