DBMS Mini Project Report

Abstract:

The Railway Reservation System facilitates the admin to add train and station and users to book ticket by adding persons and cancel ticket. The aim of case study is to design and develop a database maintaining the records of different trains , stations, tickets and passengers .

This project contains Introduction to the Railways reservation system .It is computerized system of reserving the seats of train seats in advance. It is mainly used to long route. On-line reservation has made the process for the reservation of seats very much easier than before.

In our country India, there are number of counters for the reservation of the seats and one can easily make reservations and get tickets .Then this project contains entity relationship model diagram based on railway reservation system and introduction to relation model .There is also a design of the database of the railway reservation system based on relation model.

Title: Railway Management System

Introduction:

A database management system (DBMS) is an essential tool that allows for the structured storage and retrieval of vast amounts of data. It's what keeps our data-driven world operating smoothly and efficiently. In essence, DBMS creates an environment where data can be stored, organized, and retrieved efficiently. And while this might sound like a simple task, the challenges arise when you consider the vastness of data, the need for rapid access, the imperative of security, and the requirement for data integrity.

This project is about creating a database management system for Railway Reservation System.

The Railway Reservation system facilitates the person to book tickets of specific trains on specific date from desired source and to destination by creating a user account. The aim of case study is to design and develop a database maintaining the records of different users, persons travelling, stations and trains.

Person can book their tickets for the train in the desired coaches . For this, person has to add passengers, provide the desired train number, start station, destination station, date of journey, coach type

and passenger id. Before booking a ticket for a person, the validity of train number is done. If yes, the ticket is booked with confirm status . The ticket once booked can be cancelled at any time. For this, the person has to provide the passenger id. The passenger ID is searched and the corresponding record is deleted.

With this an efficient, secure and easily manageable ticket reservation is done.

The record of train includes its number, name . Station table records its name. Table tickets records the contains information about the person PID, coach ID, start station, destination station, train number and date of journey. Person table contains person's identification number(PID), name, age and gender. The user table contains username and passwords of registered users.

Problem Definition:

The railway reservation system facilitates the passengers for booking and cancellation of tickets. It will reduce the manual errors involved in the booking and cancelling of tickets and make it convenient for the customers and providers to maintain the data about their customers and also about the seats available at

them. Due to automation many loopholes that exist in the manual maintenance of the records can be removed.

Manual process of maintaining train and the train stations details, customer details and ticket details is very difficult and allows for a large margin of error. Any cancellation or updation of the details; be it of a customer, ticket cancellation or train delay; is a time-consuming process. To eliminate these problems the railway database management system is built to handle the current issues as well function more proficiently.

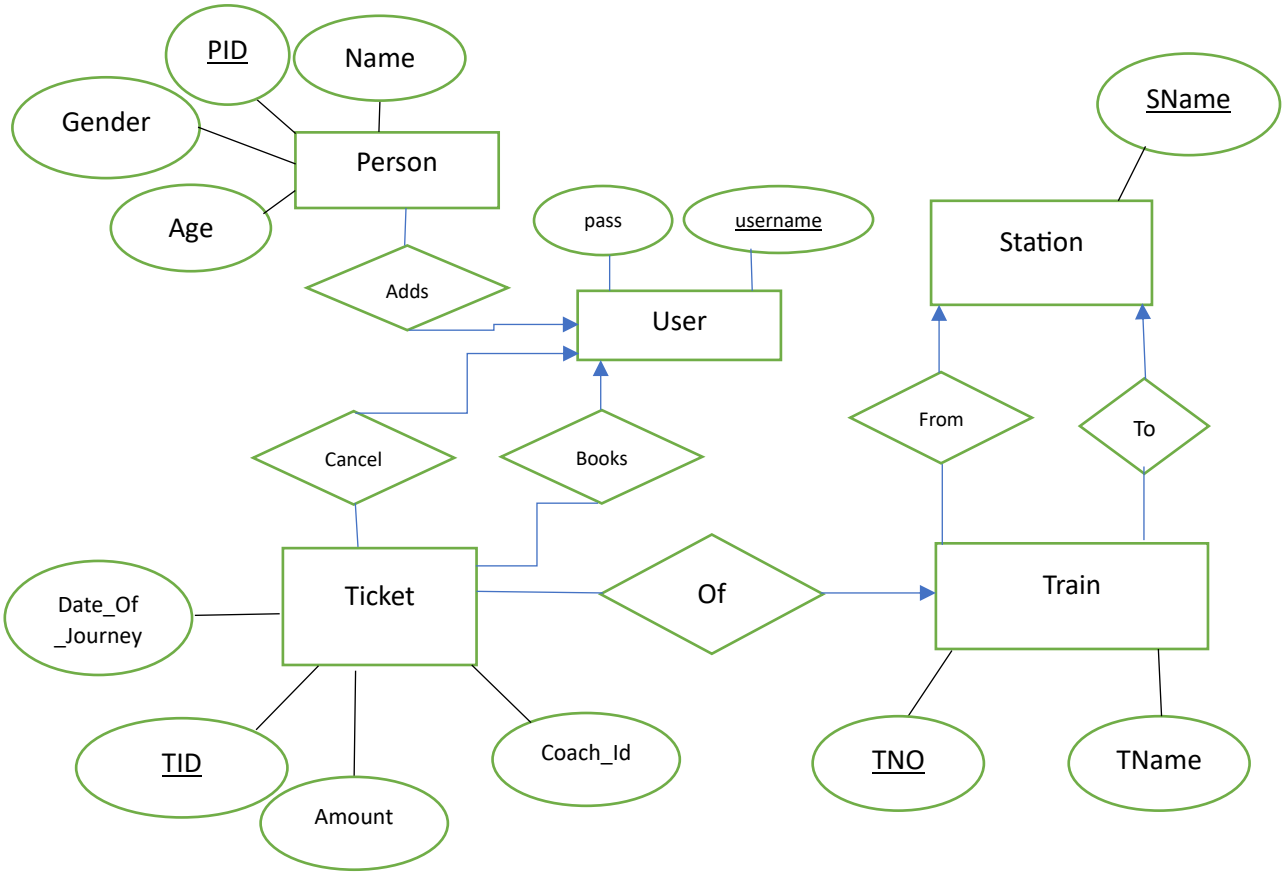
Tools and Technologies:

Database: MySql

Frontend: Eclipse IDE

Backend: Java

ER Diagram:



Relational Schema:

User : (username, pass)

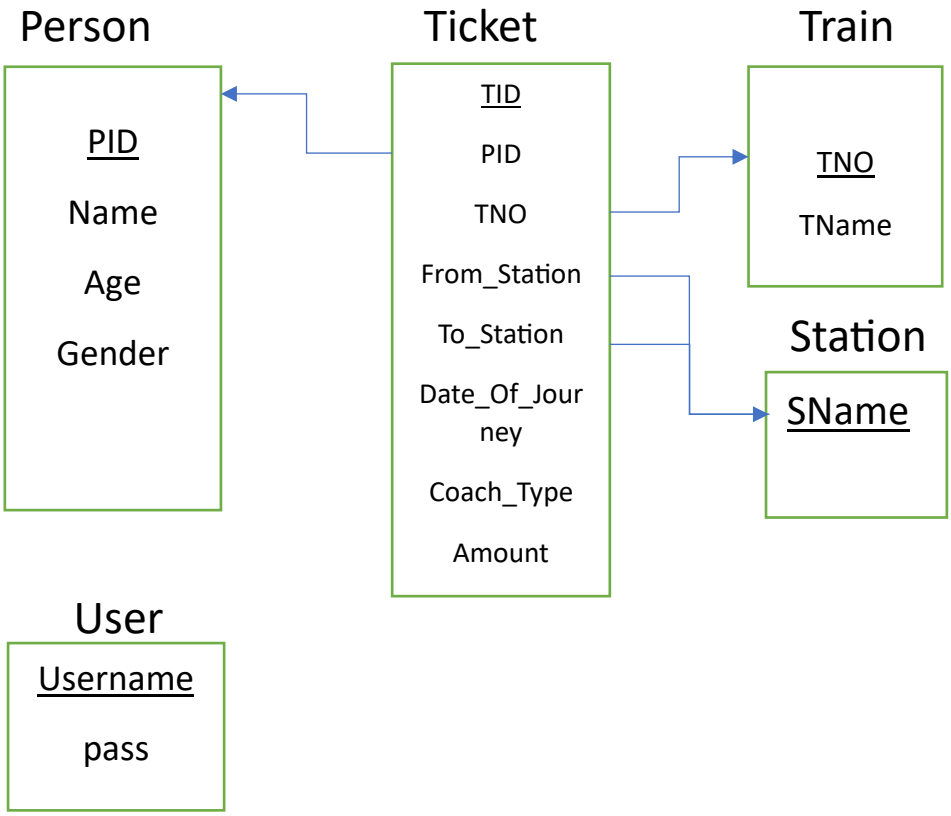
Passenger: (PID ,Name, Age, Gender)

Ticket: (TID,PID,TNO, From_Station, To_Station, Coach_Type, Amount, Date_Of_Journey)

Station: (SName)

Train: (TNO,TName)

Schema Diagram:



DDL and DML Commands:

create table user(username varchar(30) primary key,pass varchar(30));

Create table person(PID int primary key,Name varchar(30), Age int, Gender varchar(10))

Create table station(SName varchar(30) primary key)

Create table train(TNO int primary key, TName varchar(30))

Insert into person(1,'Aditi Singh',22,'F')

Insert into person(2,'Nihal Singh',17,'M')

Insert into person(3,'Kirti Singh',26,'F')

Select * from person

If any how ticket is cancelled of person id , id say given by user:

Delete from ticket where PID=id;

Group Name: 8

Tiya Das(27)

Manya Kapur(29)

Priti Shinde(33)

Aditi Singh(17)