**MYSQL DATABASE FOR TRAIN TICKET BOOKING SYSTEM**

**Project Name**: Train Ticket Booking System

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**PROJECT INTRODUCTION**

The MySQL train ticket booking system database is designed to manage and organize information related to train schedules, seat availability, user details, and booking records. This document provides an overview of the SQL commands required to set up and interact with the database.

Introduction to SQL:

Structured Query Language (SQL) is a standardized programming language used to manage relational databases and perform various operations data in them. Initially created in the 1970s, SQL is regularly used by database administrators and developers writing data integration scripts to set up and run analytical queries.

**Table of Contents:**

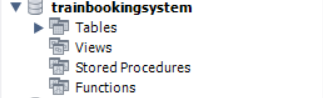
* [TO CREATE A DATABASE](#T1CREATE)
* [TO USE A DATABASE](#T1USE)
* [TO CREATE TABLE 1 TRAIN](#CREATETABLETRAIN)
* [TO INSERT VALUES INTO THE TABLE TRAIN](#INSERTINTOTRAIN)
* [TO VIEW THE STRUCTURE OF THE TABLE TRAIN](#STRUCTURETRAIN)
* [TO VIEW ALL THE DATA ENTERED INTO THE TABLE TRAIN](#DATATRAIN)
* [TO USE RELATIONAL OPERATOR](#RELATIONALTRAIN)
* [CREATE TABLE 2 STATION](#CREATETABLE2)
* [INSERTING VALUES IN TABLE 2 STATION](#INSERTINGTOTABLE2)
* [TO VIEW TABLE 2 STATION](#VIEWTABLE2)
* [TURN OFF SAFE MODE](#TURNOFFSAFE)
* [TO UPDATE TOTAL SEATS IN TABLE 1 TRAIN](#UPDATESEATSINTABLE1)
* [TO VIEW TABLE 1 UPDATED TRAIN](#UPDATEDVIEWOFTABLE1)
* [TO CREATE TABLE 3 SCHEDULE](#CREATETABLE3)
* [TO INSERT DETAILS IN TABLE 3 SCHEDULE](#INSERTINGTOTABLE3)
* [TO VIEW DETAILS OF TABLE 3 SCHEDULE](#VIEWTABLE3)
* [CREATE TABLE 4 USER](#CREATETABLE4)
* [INSERT VALUES TO TABLE 4 USER](#INSERTTOTABLE4)
* [RENAME TABLE USER TO PASSENGER](#RENAMETABLE4PASSENGER)
* [USING ALTER COMMAND TO CHANGE THE COLUMN NAME](#ALTER)
* [TO VIEW DETAILS OF TABLE 4 PASSENGER](#VIEWTABLE4)
* [USING LIKE OPERATOR](#LIKEOPERATOR)
* [CREATE TABLE 5 BOOKING](#CREATETABLE5)
* [INSERT VALUES TO TABLE 5 BOOKING](#INSERTTOTABLE5)
* [VIEW DATA OF TABLE 5 BOOKINGS](#VIEWTABLE5)
* [VIEW SELECTED DATA FROM TABLE TRAIN USING WHERE KEYWORD](#WHEREKEYWORDONE)
* [VIEW SELECTED DATA FROM TABLE STATION USING WHERE KEYWORD](#WHEREKEYWORDTWO)
* [VIEW SELECTED DATA FROM TABLE BOOKING USING WHERE KEYWORD](#WHEREKEYWORDTHREE)
* [JOINING TABLES BOOKING, PASSENGER AND TRAIN USING JOIN](#JOINBOOKINGPASSENGERTRAIN)
* [JOINING TWO TABLES TRAIN AND SCHEDULE USING JOIN](#JOINTRAINSCHEDULE)
* [USING LEFT OUTER JOIN FOR BOOKING AND SCHEDULE TABLE](#LEFTOUTERJOIN)
* [USING INNER JOIN FOR TRAIN](#INNERJOIN)

**#TO CREATE A DATABASE**

CREATE DATABASE TrainBookingSystem;

**#TO USE A DATABASE**

USE TrainBookingSystem;



**#TO CREATE TABLE 1 TRAIN**

CREATE TABLE Train (

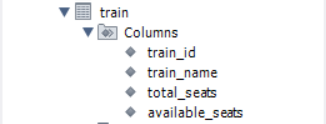
train\_id INT PRIMARY KEY,

train\_name VARCHAR(50),

total\_seats INT,

available\_seats INT

);



**#TO INSERT VALUES INTO THE TABLE TRAIN**

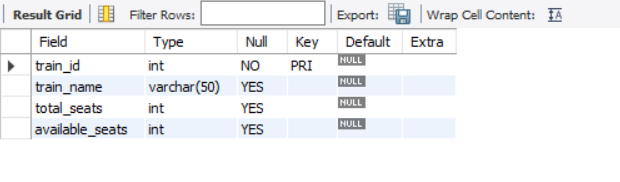
INSERT INTO Train VALUES(01, 'Train1', 20, 9),

(02, 'Train2', 30, 18),

(03, 'Train3', 40, 27);

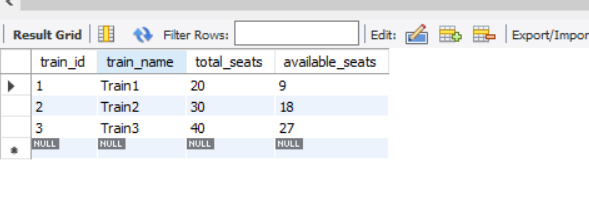
**#TO VIEW THE STRUCTURE OF THE TABLE TRAIN**

DESC TRAIN;



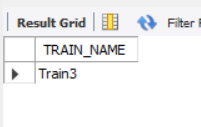
**#****TO VIEW ALL THE DATA ENTERED INTO THE TABLE TRAIN**

SELECT \* FROM Train;



**#TO USE RELATIONAL OPERATOR**

SELECT TRAIN\_NAME FROM TRAIN WHERE AVAILABLE\_SEATS>20;



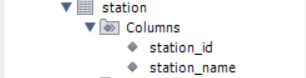
**#CREATE TABLE 2 STATION**

CREATE TABLE Station (

station\_id INT PRIMARY KEY,

station\_name VARCHAR(50)

);



**#****INSERTING VALUES IN TABLE 2 STATION**

INSERT INTO Station VALUES(100001, 'Station1'),

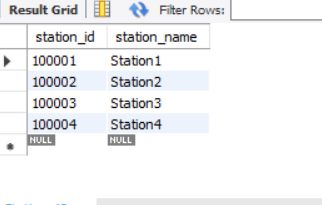
(100002, 'Station2'),

(100003, 'Station3'),

(100004, 'Station4');

**#****TO VIEW TABLE 2 STATION**

SELECT \* FROM Station;



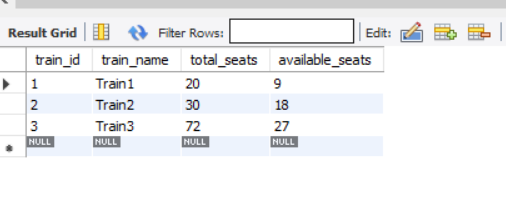
**#****TURN OFF SAFE MODE**

SET SQL\_SAFE\_UPDATES=0;

**#****TO UPDATE TOTAL SEATS IN TABLE 1 TRAIN**

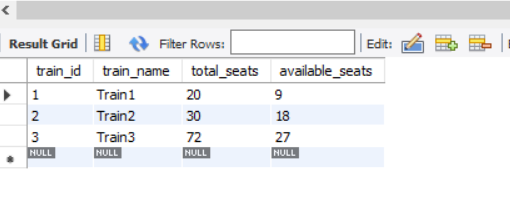
UPDATE train

SET TOTAL\_SEATS=72 WHERE TRAIN\_ID=3;

****

**#****TO VIEW TABLE 1 UPDATED TRAIN**

SELECT \* FROM TRAIN;



**#****TO CREATE TABLE 3 SCHEDULE**

CREATE TABLE Schedule (

schedule\_id INT PRIMARY KEY,

train\_id INT,

departure\_station\_id INT,

arrival\_station\_id INT,

departure\_time DATETIME,

arrival\_time DATETIME,

FOREIGN KEY (train\_id) REFERENCES Train(train\_id),

FOREIGN KEY (departure\_station\_id) REFERENCES Station(station\_id),

FOREIGN KEY (arrival\_station\_id) REFERENCES Station(station\_id)

);

**#****TO INSERT DETAILS IN TABLE 3 SCHEDULE**

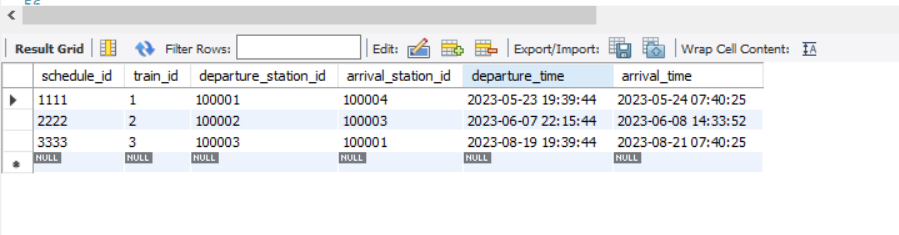
INSERT INTO Schedule VALUES(1111, 01, 100001, 100004,'2023-05-23 19:39:44', '2023-05-24 07:40:25'),

(2222, 02, 100002, 100003,'2023-06-07 22:15:44', '2023-06-08 14:33:52'),

(3333, 03, 100003, 100001,'2023-08-19 19:39:44', '2023-08-21 07:40:25');

**#****TO VIEW DETAILS OF TABLE 3 SCHEDULE**

SELECT \* FROM Schedule;



**#****CREATE TABLE 4 USER**

CREATE TABLE User (

user\_id INT PRIMARY KEY,

username VARCHAR(50),

email VARCHAR(100),

password VARCHAR(100)

);



**#****INSERT VALUES TO TABLE 4 USER**

INSERT INTO User VALUES(1000, 'Prachi', 'prachi@gmail.com', 'prachi123'),

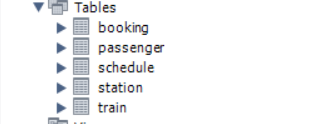
(2000, 'Shailaj', 'Shailaja@gmail.com', 'Shailaja123'),

(3000, 'Manish', 'Manish@gmail.com', 'Manish123'),

(4000, 'Ibrahim', 'Ibrahim@gmail.com', 'Ibrahim123');

**#RENAME TABLE USER TO PASSENGER**

RENAME TABLE USER TO PASSENGER;



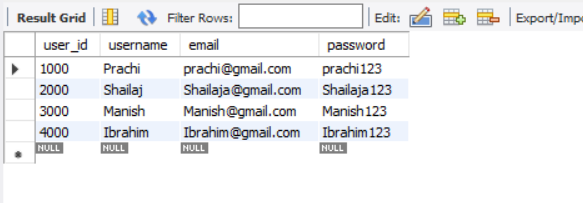
**#USING ALTER COMMAND TO CHANGE THE COLUMN NAME**

ALTER TABLE PASSENGER

RENAME COLUMN USER\_ID TO PNR;

**#****TO VIEW DETAILS OF TABLE 4 PASSENGER**

SELECT \* FROM passengerr;



**#USING LIKE OPERATOR**

SELECT \* FROM PASSENGER WHERE USERNAME LIKE 'S%';

**#****CREATE TABLE 5 BOOKING**

CREATE TABLE Booking (

booking\_id INT PRIMARY KEY,

user\_id INT,

schedule\_id INT,

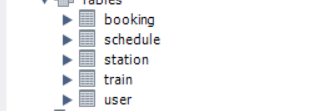
booking\_time DATETIME,

num\_of\_tickets INT,

FOREIGN KEY (user\_id) REFERENCES User(user\_id),

FOREIGN KEY (schedule\_id) REFERENCES Schedule(schedule\_id)

);



**#****INSERT VALUES TO TABLE 5 BOOKING**

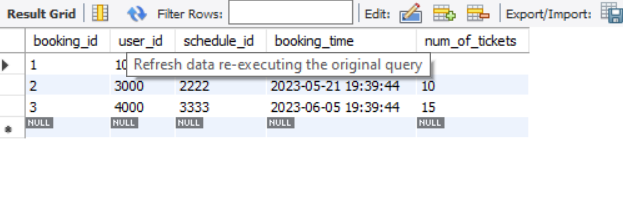
INSERT INTO Booking VALUES(1, 1000, 1111, '2023-05-30 19:39:44', 5),

(2, 3000, 2222, '2023-05-21 19:39:44', 10),

(3, 4000, 3333, '2023-06-05 19:39:44', 15);

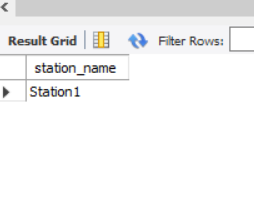
**#****VIEW DATA OF TABLE 5 BOOKINGS**

SELECT \* FROM Booking;



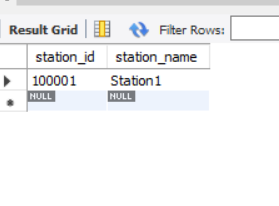
**#****VIEW SELECTED DATA FROM TABLE TRAIN USING WHERE KEYWORD**

SELECT station\_name FROM Station WHERE station\_id = 100001;



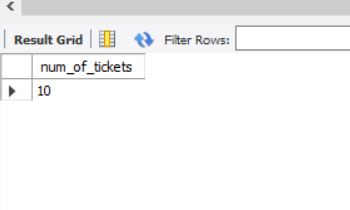
**#****VIEW SELECTED DATA FROM TABLE STATION USING WHERE KEYWORD**

SELECT \* FROM Station WHERE station\_id=100001;



**#****VIEW SELECTED DATA FROM TABLE BOOKING USING WHERE KEYWORD**

SELECT num\_of\_tickets FROM Booking WHERE booking\_id = 2;



**#****JOINING TABLES BOOKING, PASSENGER AND TRAIN USING JOIN WHICH DISPLAYS THE DATA AS BOOKING IS THE TABLE WHICH IS RELATED TO USER TABLE , TRAIN TABLE AND SCHEDULE TABLE WITH USER\_ID BEING PRIMARY KEY IN USER LINKED IN BOOKING TABLE USING FOREIGN KEY, SCHEDULE\_ID BEING PRIMARY KEY IN SCHEDULE AND LINKED TO BOOKING TABLE USING FOREIGN KEY AND TRAIN\_ID BEING A PRIMARY KEY IN TRAIN TABLE AND LINKED TO SCHEDULE USING FOREIGN KEY**

SELECT

User.username,

Train.train\_name,

Schedule.departure\_time,

Schedule.arrival\_time,

Booking.num\_of\_tickets,

Booking.booking\_time

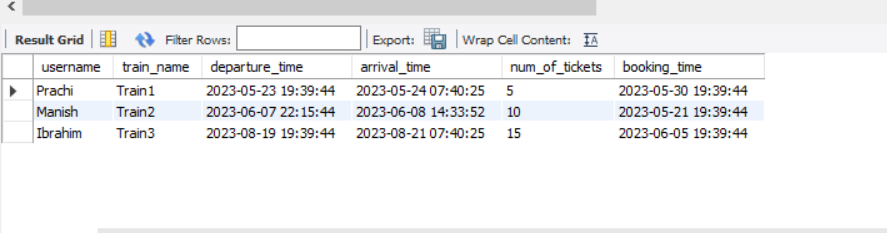
FROM Booking

JOIN User ON Booking.user\_id = User.user\_id

JOIN Schedule ON Booking.schedule\_id = Schedule.schedule\_id

JOIN Train ON Schedule.train\_id = Train.train\_id;

**#IT SHOWSUSER\_NAME FROM USER, TRAIN\_NAME FROM TRAIN TABLE, DEPARTURE\_TIME FROM SCHEDULE TABLE, ARRIVAL\_TIME FROM SCHEDULE TABLE, NUM\_OF\_TICKETS FROM BOOKING TABLE AND BOOKING\_TIME FROM BOOKING TABLE**



**#****JOINING TWO TABLES TRAIN AND SCHEDULE USING JOIN WHICH DISPLAYS THE DATA USING WHERE KEYWORD. TRAIN\_NAME IS THE PRIMARY KEY IN TRAIN TABLE WHICH IS ALSO LINKED TO SCHEDULE TABLE USING FOREIGN KEY**

SELECT

Train.train\_name,

Schedule.departure\_time,

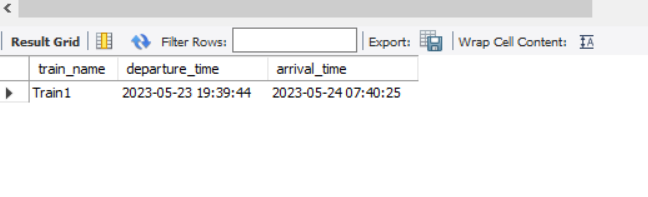
Schedule.arrival\_time

FROM Train

JOIN Schedule ON Train.train\_id = Schedule.train\_id

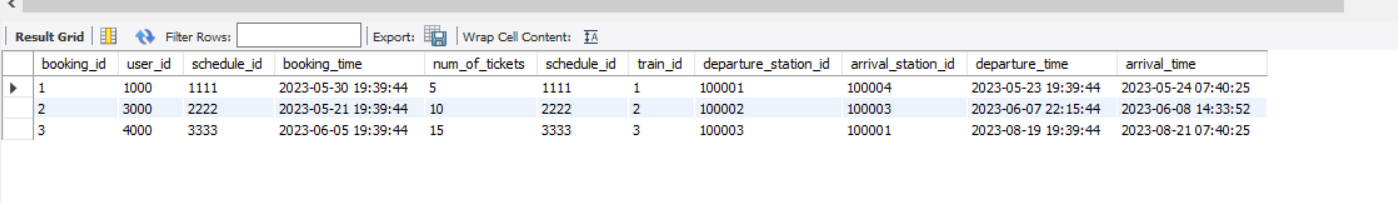
WHERE Schedule.departure\_time = '2023-05-23 19:39:44' AND Schedule.arrival\_time = '2023-05-24 07:40:25';

**#IT SHOWS TRAIN\_NAME FROM TRAIN TABLE, DEPARTURE\_TIME FROM SCHEDULE TABLE, ARRIVAL\_TIME FROM SCHEDULE TABLE**



**#USING LEFT OUTER JOIN FOR BOOKING AND SCHEDULE TABLE**

SELECT \* FROM BOOKING LEFT OUTER JOIN SCHEDULE ON BOOKING.SCHEDULE\_ID=SCHEDULE.SCHEDULE\_ID;



**#****USING INNER JOIN FOR TRAIN**

SELECT A.TRAIN\_NAME AS TRAINNAME, B.TRAIN\_ID AS TRAINID FROM TRAIN A ,TRAIN B;

