Thapar Institute of Eng. & Technology CSED Department



Railway Reservation System

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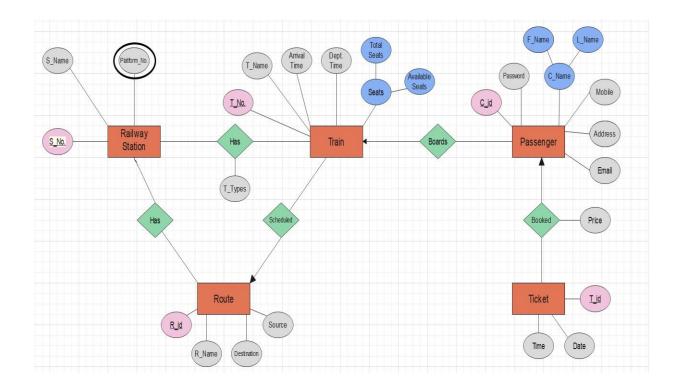
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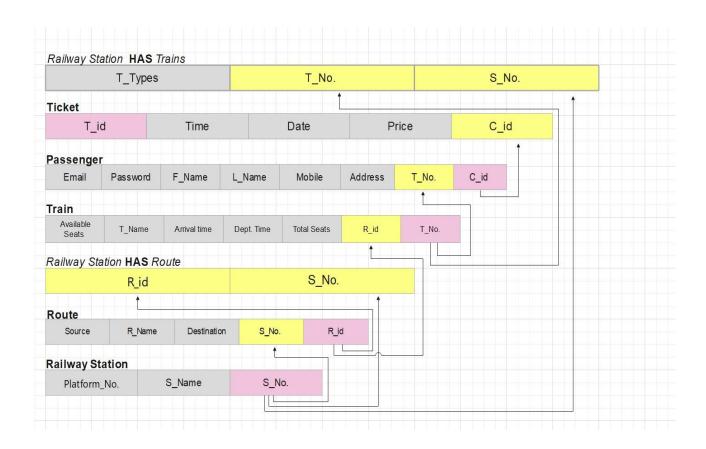
PROBLEM STATEMENT

- Keeping records for train timings.
- Records of Ticket reservations.
- Details about the passenger.
- Tracking routes of the trains.
- Records of platform number and station.

ER Diagram



ER to Table



NORMALIZATION

Railway Station <u>Has</u> Trains:-

T_types	T_No.	S_No.
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Ticket:- (1NF)

T_id	C_id

T_id	Time	Date	Price

Passenger:-

(1NF)

C_id	T_No.

	C_id	Address	Mobile	L_Name	F_Name	Password	Email	
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Train:-

Available	T_Name	Arrival_time	Dept_time	Total	R_id	T_No.
Seats				Seats		

Route:-

Source	R_Name	Destination	R_id
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Railway Station Has Routes:-

S_No.	R_id
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Railway_Station:-

(1NF)

Platform_No	S_No

S_Name	S_No
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SQL CODE

Create table Ticket(T_id number,Tim timestamp,Dat date,Price number,C_id number)

INSERT INTO Ticket VALUES(2819542664,'22-Oct-2022 09:15','22-Oct2022',186,11741)

INSERT INTO Ticket VALUES(2819542612,'14-Sep-2021 10:45','14-Sep-2021', 125, 11248)

INSERT INTO Ticket VALUES(2819542687,'26-Apr-2021 10:10:55pm','26-Apr2021', 550, 11875)

INSERT INTO Ticket VALUES(2819542655,'10-Aug-2021 03:40:21pm','10-Aug2021',240,11657)

INSERT INTO Ticket VALUES(2819542694,'07-Mar-2021 01:57:43pm','07-Mar2021',605,11432)

Select * from Ticket

Create table Passenger(Email varchar(200), Pass varchar(200), F_Name varchar(200), L_Name varchar(200), Mobile number, Address varchar(200), T_No number, C_id number)

INSERT INTO Passenger VALUES('ybansal@gmail.com', '****', 'Yash', 'Bansal', 123456789, 'Faridabad', 12926, 11248)

INSERT INTO Passenger VALUES('ayadav@yahoo.in','****', 'Arvind', 'Yadav',234567891,'Bhatinda', 12013,11432)

INSERT INTO Passenger VALUES('rsingh@gmail.com', '****', 'Rajat', 'Singh',345678921,'Hyderabad',22429,11741)

INSERT INTO Passenger VALUES('pchauhan@gmail.com','****', 'Puneet', 'Chauhan',456789312,'Mumbai',12497,11875)

INSERT INTO Passenger VALUES('hmalhotra@gmail.com', '****', 'Harshit', 'Malhotra',567894231,'Jaipur',20807,11657)

Select * from Passenger

Create table Train(AvailableSeats number, T_Name varchar(200), ArrivalTime timestamp, TotalSeats number, R_id number, T_No number)

INSERT INTO Train VALUES(823, 'ASR SHTBDI EXP', '10-Jan-2021 07:20', '10-Jan2021 01:30:30pm', 1000, 843, 22429)

INSERT INTO Train VALUES(060, 'AII ASR EXP', '10-Jan-2021 8:05:05pm', '11-Jan-2021 12:35:35pm', 500, 321, 12926)

INSERT INTO Train VALUES(005, 'PASCHIM EXP', '10-Jan-2021 11:30', '10-Jan2021 02:30:30pm', 500, 654, 12497)

```
INSERT INTO Train VALUES(081, 'MEWAR EXP', '10-Jan-2021 07:20', '10-Jan-2021 1:30:30pm', 250, 784, 20807)
```

INSERT INTO Train VALUES(450, 'HEMKUNT EXP', '10-Jan-2021 5:20:20pm', '10Jan-2021 9:58:58pm', 1000, 591, 12013)

Select * from Train

Create table Route(Source varchar(200), R_Name varchar(200), Destination varchar(200), S_No. number, R_id number);

INSERT INTO Route VALUES('Jaipur','JPJUC','Jalandhar',31,321);

INSERT INTO Route VALUES('Kota', 'KOTAUDZ', 'Udaipur', 43,784);

INSERT INTO Route VALUES('Rishikesh', 'RKSHCDG', 'Chandigarh', 54,591);

INSERT INTO Route VALUES('Amritsar', 'ASRNDLS', 'New Delhi', 28, 843);

INSERT INTO Route VALUES('Mumbai', 'MMCT', 'Ambala', 62, 654);

Select * from Route

Create table RailwayStation(Platform_No number,S_Name varchar(200), S_No number);

INSERT INTO RailwayStation VALUES(3,'Rishikesh',54);

INSERT INTO RailwayStation VALUES(6,'Amritsar',28);

INSERT INTO RailwayStation VALUES(2,'Mumbai',62);

INSERT INTO RailwayStation VALUES(5,'Kota',43);

INSERT INTO RailwayStation VALUES(1,'Jaipur',31);

Select * from RailwayStation

Create table HasRoute(R id number, S No number);

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INSERT INTO HasRoute VALUES(654,62); INSERT
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INTO HasRoute VALUES(591,54); INSERT INTO

HasRoute VALUES(321,31);

INSERT INTO HasRoute VALUES(843,28);

INSERT INTO HasRoute VALUES(784,43);

Select * from HasRoute

Create table HasTrain(T Types varchar(200), T No number, S No number);

INSERT INTO HasTrain VALUES(Express, 22429, 28);

INSERT INTO HasTrain VALUES(Express, 20807, 43); INSERT

INTO HasTrain VALUES(Express, 12926, 31); INSERT INTO

HasTrain VALUES(Express,12497,62); INSERT INTO

HasTrain VALUES(Express, 12013, 54);

Select * from HasTrain

Query to display details of train which arrive in evening at the station

Select * from train where to char(ArrivalTime,'pm')='pm'

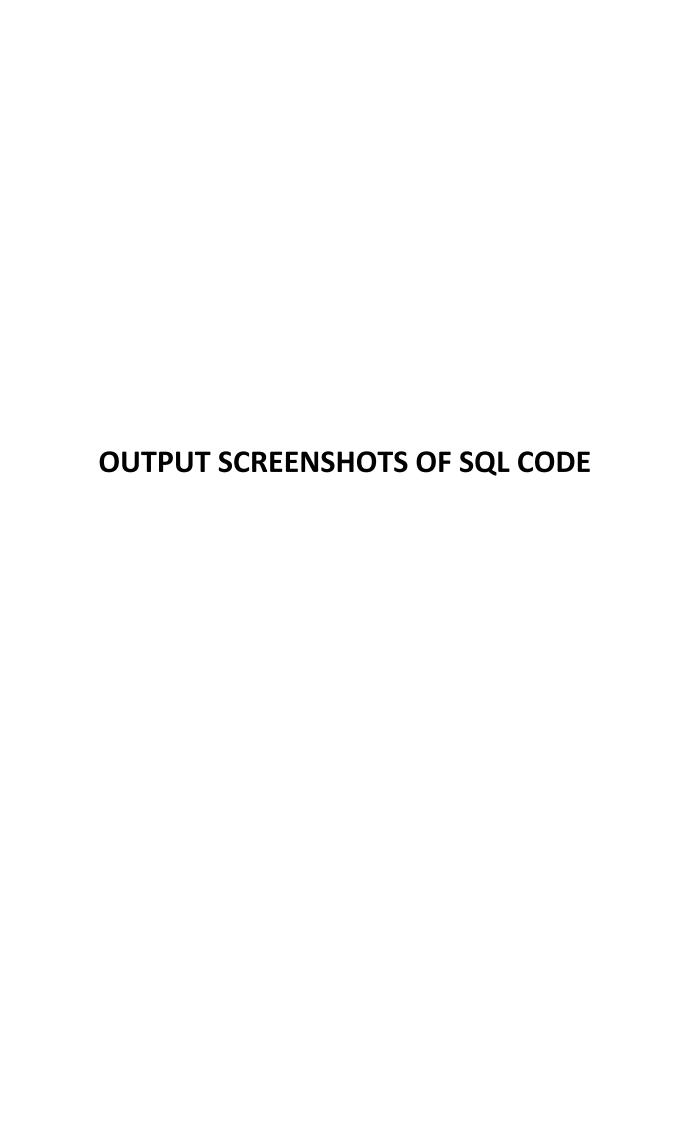
Query to display details of passenger who has taken highest Fair Ticket

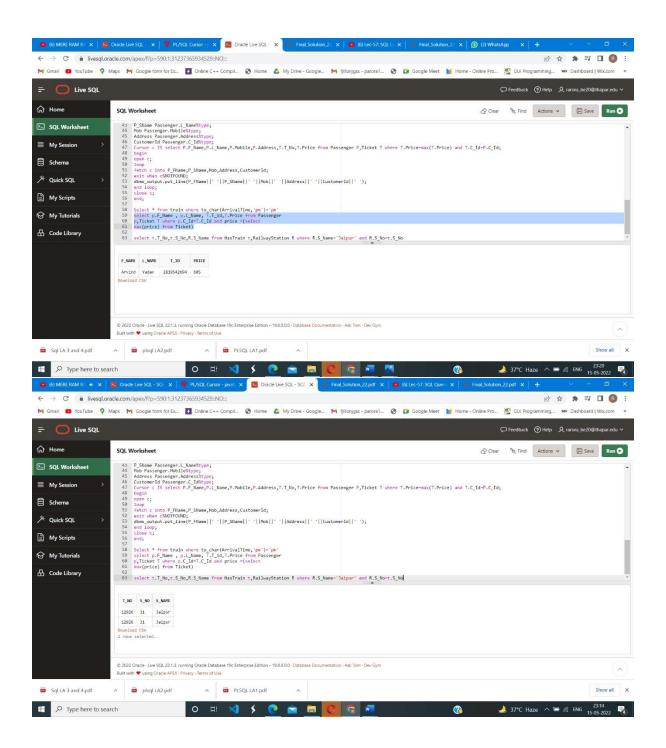
select p.F_Name , p.L_Name, T.T_id,T.Price from Passenger p,Ticket T

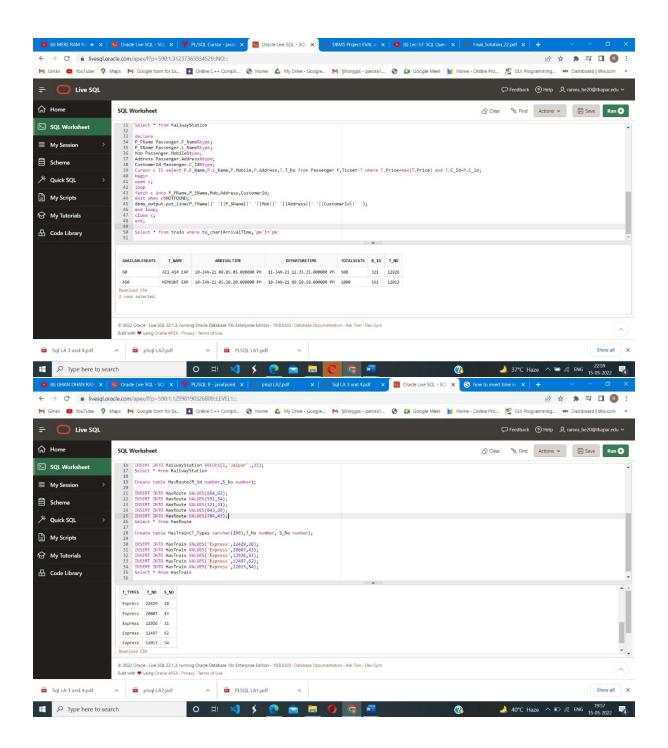
where p.C_Id=T.C_Id and price =(select max(price) from Ticket)

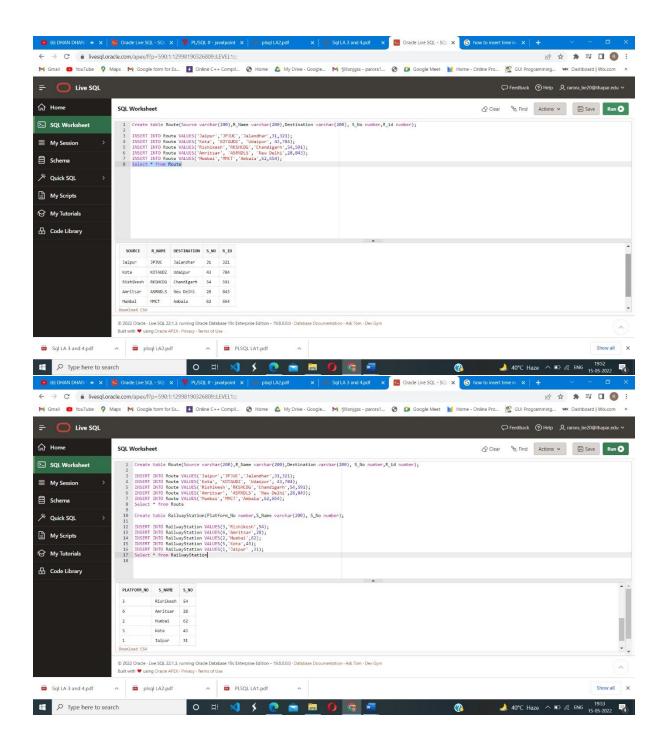
Query to display train no whose station is Jaipur

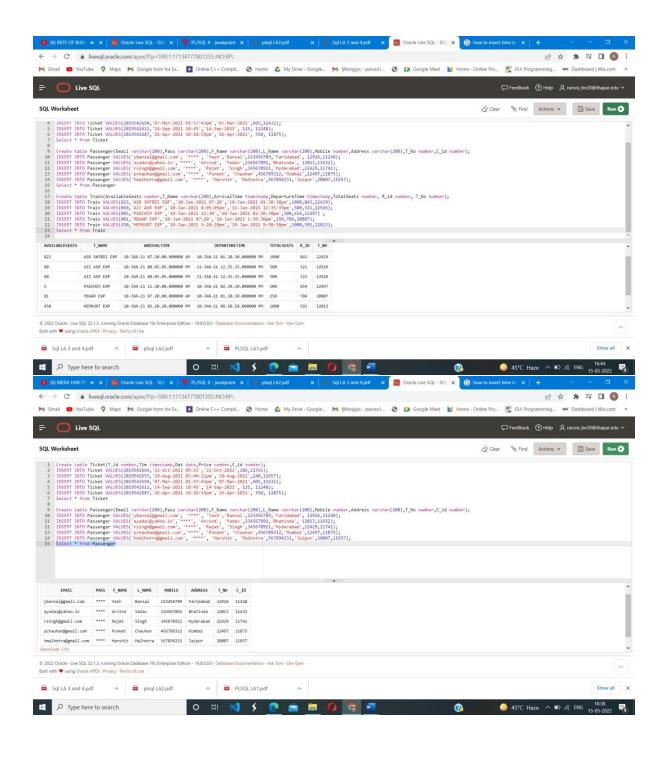
select t.T_No,t.S_No,R.S_Name from HasTrain t,RailwayStation R where R.S_Name='Jaipur' and R.S_No=t.S_No

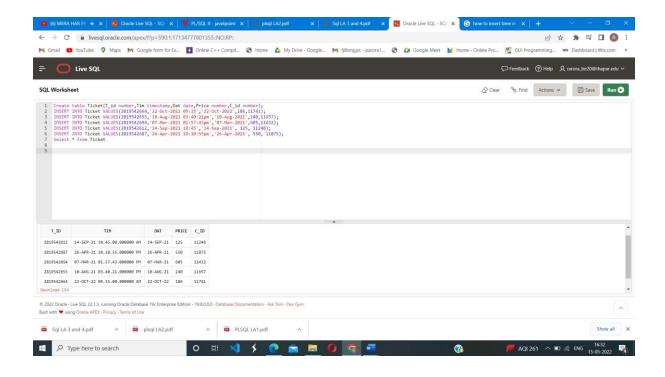












PLSQL CODE

- 1.To display details of passenger declare
- P_FName Passenger.F_Name%type;
- P_SName Passenger.L_Name%type;
- Mob Passenger. Mobile % type;
- Address Passenger.Address%type;

```
Cursor c IS select F_Name,L_Name,Mobile,Address from Passenger; begin
open c; loop fetch c into P_FName,P_SName,Mob,Address; exit when
c%NOTFOUND; dbms_output.put_line(P_FName||''||P_SName||'
'||Mob||' '||Address); end loop; close c; end;
2.To display the details of passenger whose train is in evening declare
P_FName Passenger.F_Name%type;
P_SName Passenger.L_Name%type;
Mob Passenger. Mobile % type;
Address Passenger.Address%type;
TrainNo Passenger.T_No%type;
Cursor c IS select P.F Name, P.L Name, P.Mobile, P.Address, T.T No from Passenger P, Train T where
to_char(T.ArrivalTime,'pm')='pm' and T.T_No=P.T_No; begin open c; loop fetch c into
P_FName,P_SName,Mob,Address,TrainNo; exit when c%NOTFOUND;
dbms_output.put_line(P_FName||''||P_SName||''||Mob||''||Address||''||TrainNo||'');
end loop; close c; end;
3. To display the details of passenger whose has taken highest fair ticket declare
P_FName Passenger.F_Name%type;
P_SName Passenger.L_Name%type;
Mob Passenger. Mobile % type;
Address Passenger.Address%type;
CustomerId Passenger.C_Id%type;
Cursor c IS select P.F_Name, P.L_Name, P.Mobile, P.Address, T.C_Id from Passenger P, Ticket T where
Price=(select max(Price) from Ticket) and T.C_Id=P.C_Id; begin open c; loop fetch c into
P_FName,P_SName,Mob,Address,CustomerId; exit when c%NOTFOUND;
dbms_output.put_line(P_FName||''||P_SName||''||Mob||''||Address||''||CustomerId||'');
end loop; close c; end;
```

OUTPUT SCREENSHOTS OF PLSQL CODE

