

DBMS Assignment Lab 5

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1.a)

```
mysql> CREATE VIEW compute_price AS SELECT Ticket.PNR, Ticket.Train_No, Ticket.Departure, Ticket.Arrival, Route_Info.Distance, Fare.fare_per_km FROM Ticket, Route_Info, Fare WHERE (Ticket.Train_No = Route_Info.Train_No AND Ticket.Departure = Route_Info.From_Station_Name AND Ticket.Arrival = Route_Info.To_Station_Name AND Fare.Train_Type=Ticket.Train_Type AND Fare.Compartment_Type =Ticket.Compartment_type);
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> SELECT * FROM compute_price limit 4;
```

PNR	Train_No	Departure	Arrival	Distance	fare_per_km
PNR001	62621	Bengaluru	Chennai	362	3
PNR002	62620	Chennai	Bengaluru	361	3
PNR003	25261	Chennai	Mangaluru	481	1
PNR004	25260	Mangaluru	Chennai	481	1

4 rows in set (0.00 sec)

1.b)

```
mysql> CREATE VIEW passenger_num AS select PNR, count(PNR) as numbers from Ticket_Passenger group by PNR;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> SELECT * FROM passenger_num limit 5;
```

PNR	numbers
PNR001	2
PNR002	2
PNR003	2
PNR004	2
PNR005	4

5 rows in set (0.00 sec)

1.c)

```
mysql> UPDATE Payment_Info AS p INNER JOIN compute_price AS cs ON p.PNR = cs.PNR INNER JOIN passenger_number AS pn ON cs.PNR = pn.PNR SET p.Price = cs.Distance * cs.Fare_Per_KM * pn.numbers;
Query OK, 11 rows affected (0.03 sec)
Rows matched: 11  Changed: 11  Warnings: 0

mysql> SELECT * FROM payment_info limit 5;
```

transaction_no	bank	card_no	price	pnr
146445	HDFC	1.23433E+15	2016.00	PNR006
243535	UNION BANK	2.43647E+15	776.00	PNR012
342344	IOB	5.62357E+15	2172.00	PNR001
354364	CANARA BANK	5.76879E+15	NULL	PNR014
531343	SBI	8.95327E+15	962.00	PNR004

```
5 rows in set (0.00 sec)
```

2)

```
mysql> SELECT train_no,from_station_name,to_station_name,distance from route_info where to_station_no=from_station_no+1 order by train_no;
```

train_no	from_station_name	to_station_name	distance
25260	Mangaluru	Kannur	131
25260	Kannur	Palakkad	220
25261	Chennai	Palakkad	130
25261	Palakkad	Kannur	220
25261	Kannur	Mangaluru	131
58450	Mangaluru	Subramanya	195
58450	Subramanya	Mysore	170
58450	Mysore	Bengaluru	139
58451	Bengaluru	Mysore	139
58451	Mysore	Subramanya	170
58451	Subramanya	Mangaluru	194
62620	Chennai	Sholingur	90
62620	Sholingur	Katpadi	39
62620	Katpadi	Bangarpet	161
62620	Bangarpet	Bengaluru	71
62621	Bengaluru	Bangarpet	71
62621	Bangarpet	Katpadi	161
62621	Katpadi	Sholingur	40
62621	Sholingur	Chennai	90

```
19 rows in set (0.00 sec)
```

3)

```
mysql> select route_info.train_no from route_info inner join compartment on route_info.train_no = compartment.train_number where compartment.availability > 10 and from_station_name = "bengaluru" and to_station_name = "chennai";
```

train_no
62621

```
1 row in set (0.02 sec)
```

4)

```
mysql> select name from ticket_passenger inner join payment_info on ticket_passenger.pnr = payment_info.pnr where price > 500;
+-----+
| name |
+-----+
| Smriti Irani |
| Ramya R |
| Saideepak Reddy |
| Sheela Reddy |
| Anwar Hussein |
| Karishma Husein |
| Christon D Souza |
| SaiDeepak Reddy |
| Sheela Reddy |
| Christon D Souza |
| Hema Ullal |
| Hima Ullal |
| Asha Ullal |
| Ajit Ullal |
| Anwar Hussein |
| Karishma Husein |
+-----+
16 rows in set (0.01 sec)
```

5)

```
mysql> select firstname, lastname, dob, pnr from train_user left join ticket on user_id = passenger_id;
```

firstname	lastname	dob	pnr
Narendra	Modi	1989-04-14	PNR001
Narendra	Modi	1989-04-14	PNR002
Droupadi	Murmu	1990-04-14	PNR007
Droupadi	Murmu	1990-04-14	PNR008
Manmohan	Singh	1991-04-08	PNR003
Manmohan	Singh	1991-04-08	PNR004
Ajit	Ullal	1971-01-01	NULL
Muhammed	Ali	2000-10-09	PNR005
Muhammed	Ali	2000-10-09	PNR006
Sai Deepak	Reddy	1996-12-12	NULL
Rudra	Agarwal	1996-12-13	NULL
Rahul	Khanna	1997-12-14	NULL
Nirmala	Seturaman	1998-12-15	NULL
Smriti	Irani	1999-12-16	PNR010
Ajit	Sethi	1966-04-14	PNR011
Arjun	Allu	1967-04-08	PNR012
Samanta	Prabhu	1968-04-14	PNR014
Kiran	Bedi	1969-04-14	NULL
Rahul	Gandhi	1970-04-08	PNR015
Rashkit	Shetty	1971-04-14	NULL
Rishi	Sunak	1972-04-14	NULL
Vedavalli	Srinath	1973-04-14	NULL
Subbu	Saravana	1974-04-14	NULL
Sheela	Dixit	1975-04-08	NULL
Margaret	Alva	1976-04-14	NULL
Arun	Kumar	1977-04-14	NULL
Anshu	Bhardwaj	1978-04-14	NULL
Suma	Sampat	1979-04-08	NULL
Srihari	Udupa	1980-04-14	NULL
Satish	Kotian	1981-04-14	NULL
Shradha	Nayar	1982-04-08	NULL
Manisha	Solanki	1983-04-08	NULL
Bharti	Devgan	1984-04-14	NULL
Roopa	Ram	1985-04-14	NULL
Pallavi	Ram	1986-04-08	NULL
Ravi	Naik	1987-04-14	NULL
Virat	Murthy	1988-04-14	NULL

```
37 rows in set (0.03 sec)
```

6)

```
mysql> select firstname, lastname, dob from train_user left join ticket on user_id = passenger_id where  
user_id not in (select passenger_id from ticket);
```

firstname	lastname	dob
Ajit	Ullal	1971-01-01
Sai Deepak	Reddy	1996-12-12
Rudra	Agarwal	1996-12-13
Rahul	Khanna	1997-12-14
Nirmala	Seturaman	1998-12-15
Kiran	Bedi	1969-04-14
Rashkit	Shetty	1971-04-14
Rishi	Sunak	1972-04-14
Vedavalli	Srinath	1973-04-14
Subbu	Saravana	1974-04-14
Sheela	Dixit	1975-04-08
Margaret	Alva	1976-04-14
Arun	Kumar	1977-04-14
Anshu	Bhardwaj	1978-04-14
Suma	Sampat	1979-04-08
Srihari	Udupa	1980-04-14
Satish	Kotian	1981-04-14
Shradha	Nayar	1982-04-08
Manisha	Solanki	1983-04-08
Bharti	Devgan	1984-04-14
Roopa	Ram	1985-04-14
Pallavi	Ram	1986-04-08
Ravi	Naik	1987-04-14
Virat	Murthy	1988-04-14

```
24 rows in set (0.01 sec)
```

7)


```
mysql> select pnr, train_no, travel_date, firstname, lastname from ticket right join train_user on user_
id = passenger_id;
```

pnr	train_no	travel_date	firstname	lastname
PNR001	62621	2022-08-07	Narendra	Modi
PNR002	62620	2022-08-14	Narendra	Modi
PNR007	62621	2022-08-07	Droupadi	Murmu
PNR008	62620	2022-08-02	Droupadi	Murmu
PNR003	25261	2022-08-01	Manmohan	Singh
PNR004	25260	2022-08-15	Manmohan	Singh
NULL	NULL	NULL	Ajit	Ullal
PNR005	58451	2022-08-03	Muhammed	Ali
PNR006	58450	2033-08-04	Muhammed	Ali
NULL	NULL	NULL	Sai Deepak	Reddy
NULL	NULL	NULL	Rudra	Agarwal
NULL	NULL	NULL	Rahul	Khanna
NULL	NULL	NULL	Nirmala	Seturaman
PNR010	25260	2022-08-19	Smriti	Irani
PNR011	62621	2022-08-22	Ajit	Sethi
PNR012	58451	2022-08-11	Arjun	Allu
PNR014	25260	2022-08-17	Samanta	Prabhu
NULL	NULL	NULL	Kiran	Bedi
PNR015	25260	2022-08-05	Rahul	Gandhi
NULL	NULL	NULL	Rashkit	Shetty
NULL	NULL	NULL	Rishi	Sunak
NULL	NULL	NULL	Vedavalli	Srinath
NULL	NULL	NULL	Subbu	Saravana
NULL	NULL	NULL	Sheela	Dixit
NULL	NULL	NULL	Margaret	Alva
NULL	NULL	NULL	Arun	Kumar
NULL	NULL	NULL	Anshu	Bhardwaj
NULL	NULL	NULL	Suma	Sampat
NULL	NULL	NULL	Srihari	Udupa
NULL	NULL	NULL	Satish	Kotian
NULL	NULL	NULL	Shradha	Nayar
NULL	NULL	NULL	Manisha	Solanki
NULL	NULL	NULL	Bharti	Devgan
NULL	NULL	NULL	Roopa	Ram
NULL	NULL	NULL	Pallavi	Ram
NULL	NULL	NULL	Ravi	Naik
NULL	NULL	NULL	Virat	Murthy

37 rows in set (0.00 sec)

8)

```
mysql> select passenger_id,ticket.train_no,train_name from ticket RIGHT OUTER JOIN train on ticket.train
_no=train.train_no;
```

passenger_id	train_no	train_name
ADM_003	25260	Chennai Mail
USR_007	25260	Chennai Mail
USR_010	25260	Chennai Mail
USR_012	25260	Chennai Mail
ADM_003	25261	Managaluru Mail
USR_002	58450	MAN-BEN Express
USR_002	58451	BEN-MAN Express
USR_009	58451	BEN-MAN Express
ADM_001	62620	CHE-BEN Shatabdi
ADM_002	62620	CHE-BEN Shatabdi
ADM_001	62621	BEN-CHE Shatabdi
ADM_002	62621	BEN-CHE Shatabdi
USR_008	62621	BEN-CHE Shatabdi

13 rows in set (0.02 sec)

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9)

```
mysql> SELECT t1.train_no,t1.train_name from train as t1, (select distinct t2.train_no from route_info as t2,(select distinct train_no from ticket where departure_time!="20:30:00") as t3 where (t2.train_no=t3.train_no) and (t2.Distance>100)) as t2 where (t1.train_no=t2.train_no) and (t1.Destination!="Mangaluru");
```

train_no	train_name
25260	Chennai Mail
58450	MAN-BEN Express
62620	CHE-BEN Shatabdi
62621	BEN-CHE Shatabdi

4 rows in set (0.01 sec)

10)

```
mysql> select distinct passenger_id from ticket join payment_info on ticket.pnr=payment_info.pnr where payment_info.price>(select avg(price) from payment_info);
```

passenger_id
USR_002
ADM_001

2 rows in set (0.01 sec)