

SRN: PES1UG20CS337

NAME: RIMJHIM SINGH

SECTION: F

## LAB 5

1. Update price of the ticket.

```
MariaDB [railway_337]> CREATE VIEW compute_price AS SELECT ticket_337.PNR, ticket_337.TrainNo, ticket_337.
Departure, ticket_337.Arrival, route_337.Distance, fare_table_337.FarePerKm FROM ticket_337, route_337, f
are_table_337 WHERE (ticket_337.TrainNo = route_337.Train No AND ticket_337.Departure = route_337.FromName
AND ticket_337.Arrival = route_337.ToName AND fare_table_337.TrainType = ticket_337.TrainType AND fare_ta
ble_337.CompartmentType = ticket_337.CompartmentType);
Query OK, 0 rows affected (0.008 sec)
```

```
MariaDB [railway_337]>
```

```
MariaDB [railway_337]> CREATE VIEW passenger_num AS select PNR, count(PNR) as numbers FROM
-> passenger_337 GROUP by PNR;
Query OK, 0 rows affected (0.005 sec)
```

```
MariaDB [railway_337]>
```

```
MariaDB [railway_337]> UPDATE payment_info_337 AS p INNER JOIN compute_price AS cs ON p.PNR = cs.PNR INNER
JOIN passenger_num AS pn ON cs.PNR = pn.PNR SET P.Price = cs.Distance * cs. FarePerKm * pn.numbers;
Query OK, 8 rows affected (0.012 sec)
Rows matched: 8 Changed: 8 Warnings: 0
```

```
MariaDB [railway_337]>
```

2. Retrieve the all stations along route of the Trains along with the distance between the stations

```
MariaDB [railway_337]> SELECT t.Train_No, t.T_Name, r.FromNo, r.ToNo, r.FromName, r.ToName from train_337
as t natural join route_337 as r where r.ToNo-r.FromNo=1;
```

Train_No	T_Name	FromNo	ToNo	FromName	ToName
25260	Chennai Mail	1	2	Mangaluru	Kannur
25260	Chennai Mail	2	3	Kannur	Palakkad
25261	Managaluru Mail	1	2	Chennai	Palakkad
25261	Managaluru Mail	2	3	Palakkad	Kannur
25261	Managaluru Mail	3	4	Kannur	Mangaluru
58450	MAN-BEN Express	1	2	Mangaluru	Subramanya
58450	MAN-BEN Express	2	3	Subramanya	Mysore
58450	MAN-BEN Express	3	4	Mysore	Bengaluru
58451	BEN-MAN Express	1	2	Bengaluru	Mysore
58451	BEN-MAN Express	2	3	Mysore	Subramanya
58451	BEN-MAN Express	3	4	Subramanya	Mangaluru
62620	CHE-BEN Shatabdi	1	2	Chennai	Sholingur
62620	CHE-BEN Shatabdi	2	3	Sholingur	Katpadi
62620	CHE-BEN Shatabdi	3	4	Katpadi	Bangarpet
62620	CHE-BEN Shatabdi	4	5	Bangarpet	Bengaluru
62621	BEN-CHE Shatabdi	1	2	Bengaluru	Bangarpet
62621	BEN-CHE Shatabdi	2	3	Bangarpet	Katpadi
62621	BEN-CHE Shatabdi	3	4	Katpadi	Sholigur
62621	BEN-CHE Shatabdi	4	5	Sholingur	Chennai

```
19 rows in set (0.003 sec)
```

```
MariaDB [railway_337]>
```

3. Retrieve the Train no of train which is leaving Bengaluru and arriving at Chennai with compartments availability greater than 10.

```

MariaDB [railway_337]> SELECT DISTINCT r.Train_No from compartment_337 as c inner join route_337 as r where
r.ToName ="Chennai" and r.FromName ="Bengaluru" and c.Availability>10;
+-----+
| Train_No |
+-----+
|      62621      |
+-----+
1 row in set (0.004 sec)

MariaDB [railway_337]>

```

4. Retrieve first and last name of users who have booked a ticket with price greater than 500.

```

MariaDB [railway_337]> SELECT DISTINCT user_337.Fname, user_337.LName FROM user_337 JOIN payment_info_337
ON payment_info_337.Price >500;
+-----+-----+
| Fname | LName |
+-----+-----+
| Narendra | Modi |
| Droupadi | Murmu |
| Manmohan | Singh |
| Ajit | Ullal |
| Muhammed | Ali |
| Sai Deepak | Reddy |
| Rudra | Agarwal |
| Rahul | Khanna |
| Nirmala | Seturaman |
| Smriti | Irani |
| Ajit | Sethi |
| Arjun | Allu |
| Samanta | Prabhu |
| Kiran | Bedi |
| Rahul | Gandhi |
| Rashkit | Shetty |
| Rishi | Sunak |
| Vedavalli | Srinath |
| Subbu | Saravana |
| Sheela | Dixit |
| Margaret | Alva |
| Arun | Kumar |
| Anshu | Bhardwaj |
| Suma | Sampat |
| Srihari | Udupa |
| Satish | Kotian |
| Shradha | Nayar |
| Manisha | Solanki |
| Bharti | Devgan |
| Roopa | Ram |
| Pallavi | Ram |
| Ravi | Naik |
| Virat | Murthy |
+-----+-----+
33 rows in set (0.001 sec)

MariaDB [railway_337]>

```

5. Retrieve the first name, last name, DOB and ticket PNR if they've bought it for all users.

```

MariaDB [railway_337]> SELECT user_337.Fname, user_337.LName, user_337.DOB FROM user_337 LEFT OUTER JOIN ticket_337 ON ticket_337.PNR;
+-----+-----+-----+
| Fname | LName | DOB   |
+-----+-----+-----+
| Narendra | Modi | 1989-04-14 |
| Droupadi | Murmu | 1990-04-14 |
| Manmohan | Singh | 1991-04-08 |
| Ajit | Ullal | 1971-01-01 |
| Muhammed | Ali | 2000-10-09 |
| Sai Deepak | Reddy | 1996-12-12 |
| Rudra | Agarwal | 1996-12-13 |
| Rahul | Khanna | 1997-12-14 |
| Nirmala | Seturaman | 1998-12-15 |
| Smriti | Irani | 1999-12-16 |
| Ajit | Sethi | 1966-04-14 |
| Arjun | Allu | 1967-04-08 |
| Samanta | Prabhu | 1968-04-14 |
| Kiran | Bedi | 1969-04-14 |
| Rahul | Gandhi | 1970-04-08 |
| 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 |
+-----+-----+-----+
33 rows in set, 13 warnings (0.003 sec)

MariaDB [railway_337]>

```

6. Retrieve the first name, last name, of the Users who have not bought a ticket.

```
MariaDB [railway_337]> SELECT DISTINCT user_337.Fname, user_337.LName FROM user_337 LEFT OUTER JOIN ticket_337 ON ticket_337.UserID!=user_337.UserID;
```

Fname	LName
Droupadi	Murmu
Manmohan	Singh
Ajit	Ullal
Muhammed	Ali
Sai Deepak	Reddy
Rudra	Agarwal
Rahul	Khanna
Nirmala	Seturaman
Smriti	Irani
Ajit	Sethi
Arjun	Allu
Samanta	Prabhu
Kiran	Bedi
Rahul	Gandhi
Rashkit	Shetty
Rishi	Sunak
Vedavalli	Srinath
Subbu	Saravana
Sheela	Dixit
Margaret	Alva
Arun	Kumar
Anshu	Bhardwaj
Suma	Sampat
Srihari	Udupa
Satish	Kotian
Shradha	Nayar
Manisha	Solanki
Bharti	Devgan
Roopa	Ram
Pallavi	Ram
Ravi	Naik
Virat	Murthy
Narendra	Modi

```
+-----+
33 rows in set (0.003 sec)

MariaDB [railway_337]>
```

7. Retrieve the ticket PNR, Train number, travel date and along with all users first name and last name.

```

MariaDB [railway_337]> SELECT ticket_337.PNR, ticket_337.TrainNo, ticket_337.TravelDate, user_337.Fname, u
ser_337.LName FROM ticket_337 RIGHT OUTER JOIN user_337 ON ticket_337.UserID = user_337.UserID;
+-----+-----+-----+-----+-----+
| PNR   | TrainNo | TravelDate | Fname   | LName   |
+-----+-----+-----+-----+-----+
| 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 (0.001 sec)

MariaDB [railway_337]>

```

8. Retrieve the user id if they've travelled in a train along with train id and name of all trains

```

MariaDB [railway_337]> SELECT ticket_337.UserID, train_337.Train_No, train_337.T_Name FROM ticket_337 RIGH
T OUTER JOIN train_337 ON train_337.Train_No = ticket_337.TrainNo;
+-----+-----+-----+
| UserID | Train_No | T_Name   |
+-----+-----+-----+
| ADM_001 | 62621   | BEN-CHE Shatabdi |
| ADM_001 | 62620   | CHE-BEN Shatabdi |
| ADM_003 | 25261   | Managaluru Mail |
| ADM_003 | 25260   | Chennai Mail |
| USR_002 | 58451   | BEN-MAN Express |
| USR_002 | 58450   | MAN-BEN Express |
| ADM_002 | 62621   | BEN-CHE Shatabdi |
| ADM_002 | 62620   | CHE-BEN Shatabdi |
| USR_007 | 25260   | Chennai Mail |
| USR_008 | 62621   | BEN-CHE Shatabdi |
| USR_009 | 58451   | BEN-MAN Express |
| USR_010 | 25260   | Chennai Mail |
| USR_012 | 25260   | Chennai Mail |
+-----+-----+-----+
13 rows in set (0.001 sec)

MariaDB [railway_337]>

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SRN: PES1UG20CS337	NAME: RIMJHIM SINGH	SECTION: F
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9. Retrieve the train no and name of trains whose destination is not Mangaluru and distance is not less than 100km and departure time is not 8:30:00 PM.

```
MariaDB [railway_337]> SELECT train_337.Train_No, train_337.T_Name FROM train_337 WHERE train_337.Destination != 'Mangaluru' AND train_337.Train_No NOT IN (SELECT DISTINCT route_337.Train_No FROM route_337 WHERE route_337.Distance < 100) AND train_337.Train_No IN (SELECT DISTINCT ticket_337.TrainNo FROM ticket_337 WHERE ticket_337.DepartureTime != '20:30:00');
+-----+-----+
| Train_No | T_Name |
+-----+-----+
| 25260    | Chennai Mail |
| 58450    | MAN-BEN Express |
+-----+-----+
2 rows in set (0.007 sec)

MariaDB [railway_337]>
```

10. Retrieve the User ID who has spent more ticket price than the average ticket price.

```
MariaDB [railway_337]> SELECT ticket_337.UserID from ticket_337 WHERE ticket_337.PNR IN (SELECT payment_info_337.PNR FROM payment_info_337 WHERE payment_info_337.Price > (SELECT AVG(Price) FROM payment_info_337));
+-----+
| UserID |
+-----+
| ADM_001 |
| ADM_001 |
| USR_002 |
+-----+
3 rows in set (0.003 sec)

MariaDB [railway_337]>
```