DBMS LAB 5

07.10.2022

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PES1UG20CS667

K Section

1. Update price of the ticket.

```
Command Prompt - mysql  -u root                                                                  —   □   ×

MariaDB [cs667_rr]> create view get1 as (select PNR, Distance, Fare_Per_KM, t.Train_No from fare_table f,ticket t, route_in
fo r where f.Train_type = t.Train_Type and f.Compartment_Type = t.Compartment_Type and r.From_Station_Name = t.Departure an
d r.To_Station_Name = t.Arrival);
Query OK, 0 rows affected (0.007 sec)

MariaDB [cs667_rr]> update payment_info inner join get1 on (payment_info.PNR = get1.PNR) inner join get2 on (get1.PNR = get
2.PNR) set payment_info.Price = get1.Distance * get1.Fare_Per_KM * get2.passenger_no;
ERROR 1146 (42S02): Table 'cs667_rr.get2' doesn't exist
MariaDB [cs667_rr]> create view get2 as (select PNR,count(*) passenger_no from ticket_passenger group by PNR);
Query OK, 0 rows affected (0.008 sec)

MariaDB [cs667_rr]> update payment_info inner join get1 on (payment_info.PNR = get1.PNR) inner join get2 on (get1.PNR = get
2.PNR) set payment_info.Price = get1.Distance * get1.Fare_Per_KM * get2.passenger_no;
Query OK, 0 rows affected (0.002 sec)
+----------------+-------------+--------------------+---------+---------+
| Transaction_Id | Bank        | Card_Number        | Price   | PNR     |
+----------------+-------------+--------------------+---------+---------+
|         146445 | HDFC        | 1230000000000000   |   806.4 | PNR006  |
|         243535 | UNION BANK  | 2440000000000000   |   533.5 | PNR012  |
|         342344 | IOB         | 5620000000000000   |  2389.2 | PNR001  |
|         354364 | CANARA BANK | 5770000000000000   |     297 | PNR014  |
|         531343 | SBI         | 8950000000000000   |  1298.7 | PNR004  |
|         576768 | ICICI       | 7560000000000000   |  558.72 | PNR007  |
|         676756 | CANARA BANK | 7370000000000000   |  2382.6 | PNR002  |
|         746745 | KOTAK       | 2550000000000000   |     957 | PNR008  |
|         758900 | UNION BANK  | 2430000000000000   |   175.5 | PNR015  |
|         867546 | UNION BANK  | 4660000000000000   |   353.7 | PNR010  |
|         867547 | SBI         | 7470000000000000   |    NULL | PNR011  |
|         978098 | INDIAN BANK | 9890000000000000   |  2213.2 | PNR005  |
|         978776 | UNION BANK  | 11549800000000000  |   913.9 | PNR003  |
+----------------+-------------+--------------------+---------+---------+
```

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

```
Command Prompt - mysql  -u root
MariaDB [cs667_rr]> select t.train_no, train_name, from_station_name, to_station_name, distance, arrival, destination from train t, route_info r where t.train_no = r.train_no;
+----------+--------------------+-------------------+------------------+----------+-----------+------------+
| train_no | train_name         | from_station_name | to_station_name  | distance | arrival   | destination|
+----------+--------------------+-------------------+------------------+----------+-----------+------------+
|    25260 | Chennai Mail       | Mangaluru         | Kannur           |      131 | Mangaluru | Chennai    |
|    25260 | Chennai Mail       | Mangaluru         | Palakkad         |      351 | Mangaluru | Chennai    |
|    25260 | Chennai Mail       | Mangaluru         | Chennai          |      481 | Mangaluru | Chennai    |
|    25260 | Chennai Mail       | Kannur            | Palakkad         |      220 | Mangaluru | Chennai    |
|    25260 | Chennai Mail       | Kannur            | Chennai          |      350 | Mangaluru | Chennai    |
|    25260 | Chennai Mail       | Palakkad          | Chennai          |      130 | Mangaluru | Chennai    |
|    25261 | Managaluru Mail    | Chennai           | Palakkad         |      130 | Chennai   | Mangaluru  |
|    25261 | Managaluru Mail    | Chennai           | Kannur           |      350 | Chennai   | Mangaluru  |
|    25261 | Managaluru Mail    | Chennai           | Mangaluru        |      481 | Chennai   | Mangaluru  |
|    25261 | Managaluru Mail    | Palakkad          | Kannur           |      220 | Chennai   | Mangaluru  |
|    25261 | Managaluru Mail    | Palakkad          | Mangaluru        |      351 | Chennai   | Mangaluru  |
|    25261 | Managaluru Mail    | Kannur            | Mangaluru        |      131 | Chennai   | Mangaluru  |
|    58450 | MAN-BEN Express    | Mangaluru         | Subramanya       |      195 | Mangaluru | Bengaluru  |
|    58450 | MAN-BEN Express    | Mangaluru         | Mysore           |      365 | Mangaluru | Bengaluru  |
|    58450 | MAN-BEN Express    | Mangaluru         | Bengaluru        |      504 | Mangaluru | Bengaluru  |
|    58450 | MAN-BEN Express    | Subramanya        | Mysore           |      170 | Mangaluru | Bengaluru  |
|    58450 | MAN-BEN Express    | Subramanya        | Bengaluru        |      309 | Mangaluru | Bengaluru  |
|    58450 | MAN-BEN Express    | Mysore            | Bengaluru        |      139 | Mangaluru | Bengaluru  |
|    58451 | BEN-MAN Express    | Bengaluru         | Mysore           |      139 | Bengaluru | Mangaluru  |
|    58451 | BEN-MAN Express    | Bengaluru         | Subramanya       |      309 | Bengaluru | Mangaluru  |
|    58451 | BEN-MAN Express    | Bengaluru         | Mangaluru        |      503 | Bengaluru | Mangaluru  |
|    58451 | BEN-MAN Express    | Mysore            | Subramanya       |      170 | Bengaluru | Mangaluru  |
|    58451 | BEN-MAN Express    | Mysore            | Mangaluru        |      364 | Bengaluru | Mangaluru  |
|    58451 | BEN-MAN Express    | Subramanya        | Mangaluru        |      194 | Bengaluru | Mangaluru  |
|    62620 | CHE-BEN Shatabdi   | Chennai           | Sholingur        |       90 | Chennai   | Bengaluru  |
|    62620 | CHE-BEN Shatabdi   | Chennai           | Katpadi          |      129 | Chennai   | Bengaluru  |
|    62620 | CHE-BEN Shatabdi   | Chennai           | Bangarpet        |      290 | Chennai   | Bengaluru  |
|    62620 | CHE-BEN Shatabdi   | Chennai           | Bengaluru        |      361 | Chennai   | Bengaluru  |
|    62620 | CHE-BEN Shatabdi   | Sholingur         | Katpadi          |       39 | Chennai   | Bengaluru  |
|    62620 | CHE-BEN Shatabdi   | Sholingur         | Bangarpet        |      200 | Chennai   | Bengaluru  |
|    62620 | CHE-BEN Shatabdi   | Sholingur         | Chennai          |      271 | Chennai   | Bengaluru  |
|    62620 | CHE-BEN Shatabdi   | Katpadi           | Bangarpet        |      161 | Chennai   | Bengaluru  |
|    62620 | CHE-BEN Shatabdi   | Katpadi           | Chennai          |      232 | Chennai   | Bengaluru  |
|    62620 | CHE-BEN Shatabdi   | Bangarpet         | Bengaluru        |       71 | Chennai   | Bengaluru  |
|    62621 | BEN-CHE Shatabdi   | Bengaluru         | Bangarpet        |       71 | Bengaluru | Chennai    |
|    62621 | BEN-CHE Shatabdi   | Bengaluru         | Katpadi          |      232 | Bengaluru | Chennai    |
|    62621 | BEN-CHE Shatabdi   | Bengaluru         | Sholigur         |      272 | Bengaluru | Chennai    |
|    62621 | BEN-CHE Shatabdi   | Bengaluru         | Chennai          |      362 | Bengaluru | Chennai    |
|    62621 | BEN-CHE Shatabdi   | Bangarpet         | Katpadi          |      161 | Bengaluru | Chennai    |
|    62621 | BEN-CHE Shatabdi   | Bangarpet         | Sholigur         |      201 | Bengaluru | Chennai    |
|    62621 | BEN-CHE Shatabdi   | Bangarpet         | Chennai          |      291 | Bengaluru | Chennai    |
|    62621 | BEN-CHE Shatabdi   | Katpadi           | Sholigur         |       40 | Bengaluru | Chennai    |
|    62621 | BEN-CHE Shatabdi   | Katpadi           | Chennai          |      130 | Bengaluru | Chennai    |
|    62621 | BEN-CHE Shatabdi   | Sholingur         | Chennai          |       90 | Bengaluru | Chennai    |
```

```
|    62621 | BEN-CHE Shatabdi   | Sholingur         | Chennai          |       90 | Bengaluru | Chennai    |
+----------+--------------------+-------------------+------------------+----------+-----------+------------+
44 rows in set (0.015 sec)

MariaDB [cs667_rr]>
```

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

```
MariaDB [pes1ug20cs658_rr]> select distinct t.Train_no,Arrival,Destination from train t,
 compartment c where Arrival = "Bengaluru" and Destination = "Chennai" and c.Availabilit
y > 10;
+----------+-----------+-------------+
| Train_no | Arrival   | Destination |
+----------+-----------+-------------+
|    62621 | Bengaluru | Chennai     |
+----------+-----------+-------------+
1 row in set (0.001 sec)

MariaDB [pes1ug20cs658_rr]>
```

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

```
+-----------+-------+
| Fname     | Lname |
+-----------+-------+
| Muhammed  | Ali   |
| Arjun     | Allu  |
| Narendra  | Modi  |
| Manmohan  | Singh |
| Droupadi  | Murmu |
| Narendra  | Modi  |
| Droupadi  | Murmu |
| Muhammed  | Ali   |
| Manmohan  | Singh |
+-----------+-------+
9 rows in set (0.003 sec)
```

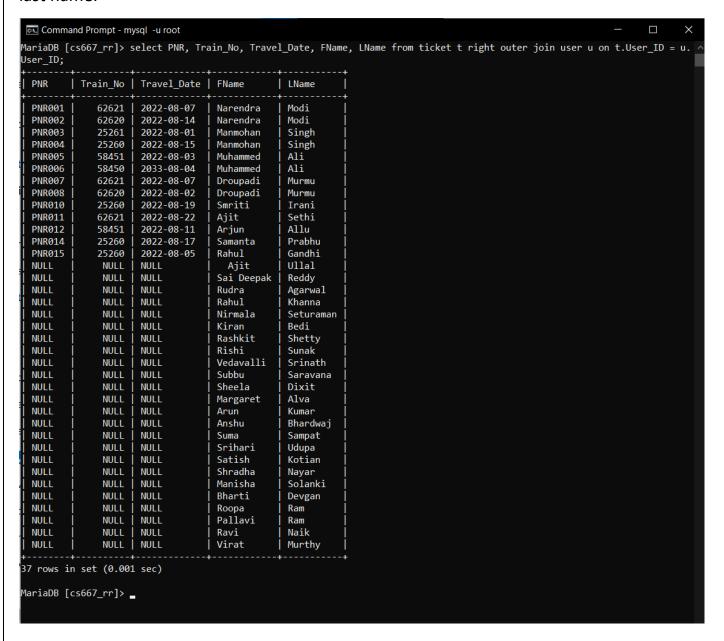5. Retrieve the first name, last name, DOB and ticket PNR if they've bought it for all users.

```
Command Prompt - mysql  -u root                                                      —    □    ×

MariaDB [cs667_rr]> select distinct Fname,Lname,DOB,PNR from ticket t left outer join user u ON u.User_ID = t.User_ID;
+-----------+--------+------------+--------+
| Fname     | Lname  | DOB        | PNR    |
+-----------+--------+------------+--------+
| Narendra  | Modi   | 1989-04-14 | PNR001 |
| Narendra  | Modi   | 1989-04-14 | PNR002 |
| Manmohan  | Singh  | 1991-04-08 | PNR003 |
| Manmohan  | Singh  | 1991-04-08 | PNR004 |
| Muhammed  | Ali    | 2000-10-09 | PNR005 |
| Muhammed  | Ali    | 2000-10-09 | PNR006 |
| Droupadi  | Murmu  | 1990-04-14 | PNR007 |
| Droupadi  | Murmu  | 1990-04-14 | PNR008 |
| Smriti    | Irani  | 1999-12-16 | PNR010 |
| Ajit      | Sethi  | 1966-04-14 | PNR011 |
| Arjun     | Allu   | 1967-04-08 | PNR012 |
| Samanta   | Prabhu | 1968-04-14 | PNR014 |
| Rahul     | Gandhi | 1970-04-08 | PNR015 |
+-----------+--------+------------+--------+
13 rows in set (0.002 sec)

MariaDB [cs667_rr]>
```

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

```
Command Prompt - mysql -u root                                                    —   □   ×

MariaDB [cs667_rr]> select Fname, Lname from user u left outer join ticket t on u.User_ID= t.User_ID where PNR is null;
+------------+-----------+
| Fname      | Lname     |
+------------+-----------+
|   Ajit     | Ullal     |
| Sai Deepak | Reddy     |
| Rudra      | Agarwal   |
| Rahul      | Khanna    |
| Nirmala    | Seturaman |
| Kiran      | Bedi      |
| 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    |
+------------+-----------+
24 rows in set (0.003 sec)

MariaDB [cs667_rr]> _
```

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

```
Command Prompt - mysql -u root                                                — □ ×

MariaDB [cs667_rr]> select PNR, Train_No, Travel_Date, FName, LName from ticket t right outer join user u on t.User_ID = u.
User_ID;
+---------+----------+-------------+------------+-----------+
| PNR     | Train_No | Travel_Date | FName      | LName     |
+---------+----------+-------------+------------+-----------+
| PNR001  |    62621 | 2022-08-07  | Narendra   | Modi      |
| PNR002  |    62620 | 2022-08-14  | Narendra   | Modi      |
| PNR003  |    25261 | 2022-08-01  | Manmohan   | Singh     |
| PNR004  |    25260 | 2022-08-15  | Manmohan   | Singh     |
| PNR005  |    58451 | 2022-08-03  | Muhammed   | Ali       |
| PNR006  |    58450 | 2033-08-04  | Muhammed   | Ali       |
| PNR007  |    62621 | 2022-08-07  | Droupadi   | Murmu     |
| PNR008  |    62620 | 2022-08-02  | Droupadi   | Murmu     |
| 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    |
| PNR015  |    25260 | 2022-08-05  | Rahul      | Gandhi    |
| NULL    |     NULL | NULL        | Ajit       | Ullal     |
| NULL    |     NULL | NULL        | Sai Deepak | Reddy     |
| NULL    |     NULL | NULL        | Rudra      | Agarwal   |
| NULL    |     NULL | NULL        | Rahul      | Khanna    |
| NULL    |     NULL | NULL        | Nirmala    | Seturaman |
| NULL    |     NULL | NULL        | Kiran      | Bedi      |
| 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 [cs667_rr]> _
```

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

```
Command Prompt - mysql -u root                                                    —   □   ×
MariaDB [cs667_rr]> select User_ID , train.Train_no, Train_name from ticket right outer join train on ticket.Train_no = tra
in.Train_No;
+---------+----------+-------------------+
| User_ID | Train_no | Train_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 [cs667_rr]>
```

9. Retrieve the train no and name of trains whose destination is not Mangalore and distance is not less than 100km and departure time is not 8:30:00 PM.

```
MariaDB [pes1ug20cs658_rr]> select Train_no , Train_name from train where Train_no IN ( select Train_Num
ber from ticket where Arrival != "Mangaluru" and Departure_Time != '20:30:00' and Train_Number in (selec
t Train_no from route_info where Distance > 100));
+----------+-------------------+
| Train_no | Train_name        |
+----------+-------------------+
|    62621 | BEN-CHE Shatabdi  |
|    62620 | CHE-BEN Shatabdi  |
|    25260 | Chennai Mail      |
|    58450 | MAN-BEN Express   |
+----------+-------------------+
4 rows in set (0.001 sec)
```

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

```
MariaDB [cs667_rr]> select User_ID from ticket where PNR in (select PNR from payment_info where Price > (select avg(Price)
from payment_info));
+---------+
| User_ID |
+---------+
| ADM_001 |
| ADM_001 |
| ADM_003 |
| USR_002 |
+---------+
4 rows in set (0.001 sec)
```