DBMS LAB 5

SQL – Joins: Inner, Outer; Sub queries: Correlated and Uncorrelated

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SRN: PES1UG20CS648

Section: K

Roll No: 43

1.Update price of the ticket.

```
MariaDB [cs_pes1ug20cs648_railways]> source ./PES1UG20CS648_lab05.sql
ERROR 1050 (42S01) at line 1 in file: '.\PES1UG20CS648_lab05.sql': Table 'cp' already exists
ERROR 1050 (42S01) at line 3 in file: '.\PES1UG20CS648_lab05.sql': Table 'pv' already exists
Query OK, 0 rows affected (0.024 sec)
Rows matched: 12  Changed: 0  Warnings: 0
```

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

```
+-----------+-------------+----------+
| source    | destination | distance |
+-----------+-------------+----------+
| Mangaluru | Chennai     |      481 |
| Chennai   | Mangaluru   |      481 |
| Mangaluru | Bengaluru   |      504 |
| Bengaluru | Mangaluru   |      503 |
| Chennai   | Bengaluru   |      361 |
| Bengaluru | Chennai     |      362 |
+-----------+-------------+----------+
6 rows in set (0.007 sec)
```

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

```
+----------+
| train_no |
+----------+
|    62621 |
+----------+
1 row in set (0.006 sec)
```

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

```
+-----------+----------+
| firstname | lastname |
+-----------+----------+
| 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.

```
+------------+-----------+------------+--------+
| 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 (0.001 sec)
```

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

```
+------------+-----------+------------+------+
| firstname  | lastname  | dob        | pnr  |
+------------+-----------+------------+------+
|    Ajit    | Ullal     | 1971-01-01 | NULL |
| 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 |
| Kiran      | Bedi      | 1969-04-14 | NULL |
| 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 |
+------------+-----------+------------+------+
24 rows in set (0.000 sec)
```

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

```
+---------+----------+-------------+------------+-----------+
| 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 (0.000 sec)
```

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

```
+---------+----------+------------------+
| user_id | train_no | train_name       |
+---------+----------+------------------+
| ADM_003 |    25260 | Chennai Mail     |
| USR_007 |    25260 | Chennai Mail     |
| ADM_001 |    25261 | Managaluru Mail  |
| ADM_002 |    25261 | Managaluru Mail  |
| ADM_003 |    25261 | Managaluru Mail  |
| USR_004 |    25261 | Managaluru Mail  |
| USR_005 |    25261 | Managaluru Mail  |
| USR_009 |    25261 | Managaluru Mail  |
| USR_015 |    25261 | Managaluru Mail  |
| ADM_001 |    58450 | MAN-BEN Express  |
| ADM_002 |    58450 | MAN-BEN Express  |
| ADM_003 |    58450 | MAN-BEN Express  |
| USR_003 |    58450 | MAN-BEN Express  |
| USR_004 |    58450 | MAN-BEN Express  |
| USR_006 |    58450 | MAN-BEN Express  |
| USR_010 |    58450 | MAN-BEN Express  |
| USR_012 |    58450 | MAN-BEN Express  |
| USR_014 |    58450 | MAN-BEN Express  |
| USR_018 |    58450 | MAN-BEN Express  |
| USR_019 |    58450 | MAN-BEN Express  |
| USR_020 |    58450 | MAN-BEN Express  |
| USR_021 |    58450 | MAN-BEN Express  |
| USR_022 |    58450 | MAN-BEN Express  |
| USR_023 |    58450 | MAN-BEN Express  |
| USR_026 |    58450 | MAN-BEN Express  |
| ADM_001 |    58451 | BEN-MAN Express  |
| ADM_002 |    58451 | BEN-MAN Express  |
| ADM_003 |    58451 | BEN-MAN Express  |
| USR_001 |    58451 | BEN-MAN Express  |
| USR_002 |    58451 | BEN-MAN Express  |
| USR_003 |    58451 | BEN-MAN Express  |
| USR_005 |    58451 | BEN-MAN Express  |
| USR_006 |    58451 | BEN-MAN Express  |
| USR_007 |    58451 | BEN-MAN Express  |
| USR_008 |    58451 | BEN-MAN Express  |
| USR_009 |    58451 | BEN-MAN Express  |
```

```
| USR_007 |    58451 | BEN-MAN Express  |
| USR_008 |    58451 | BEN-MAN Express  |
| USR_009 |    58451 | BEN-MAN Express  |
| USR_010 |    58451 | BEN-MAN Express  |
| USR_011 |    58451 | BEN-MAN Express  |
| USR_012 |    58451 | BEN-MAN Express  |
| USR_013 |    58451 | BEN-MAN Express  |
| USR_014 |    58451 | BEN-MAN Express  |
| USR_015 |    58451 | BEN-MAN Express  |
| USR_016 |    58451 | BEN-MAN Express  |
| USR_017 |    58451 | BEN-MAN Express  |
| USR_018 |    58451 | BEN-MAN Express  |
| USR_019 |    58451 | BEN-MAN Express  |
| USR_020 |    58451 | BEN-MAN Express  |
| USR_022 |    58451 | BEN-MAN Express  |
| USR_024 |    58451 | BEN-MAN Express  |
| USR_026 |    58451 | BEN-MAN Express  |
| USR_027 |    58451 | BEN-MAN Express  |
| USR_028 |    58451 | BEN-MAN Express  |
| USR_030 |    58451 | BEN-MAN Express  |
| ADM_001 |    62620 | CHE-BEN Shatabdi |
| ADM_002 |    62620 | CHE-BEN Shatabdi |
| ADM_003 |    62620 | CHE-BEN Shatabdi |
| USR_003 |    62620 | CHE-BEN Shatabdi |
| USR_004 |    62620 | CHE-BEN Shatabdi |
| USR_005 |    62620 | CHE-BEN Shatabdi |
| USR_009 |    62620 | CHE-BEN Shatabdi |
| USR_017 |    62620 | CHE-BEN Shatabdi |
| USR_025 |    62620 | CHE-BEN Shatabdi |
| ADM_001 |    62621 | BEN-CHE Shatabdi |
| ADM_002 |    62621 | BEN-CHE Shatabdi |
| ADM_003 |    62621 | BEN-CHE Shatabdi |
| USR_003 |    62621 | BEN-CHE Shatabdi |
| USR_005 |    62621 | BEN-CHE Shatabdi |
| USR_006 |    62621 | BEN-CHE Shatabdi |
| USR_007 |    62621 | BEN-CHE Shatabdi |
| USR_008 |    62621 | BEN-CHE Shatabdi |
| USR_011 |    62621 | BEN-CHE Shatabdi |
| USR_015 |    62621 | BEN-CHE Shatabdi |
| USR_016 |    62621 | BEN-CHE Shatabdi |
| USR_021 |    62621 | BEN-CHE Shatabdi |
| USR_023 |    62621 | BEN-CHE Shatabdi |
| USR_029 |    62621 | BEN-CHE Shatabdi |
+---------+----------+------------------+
76 rows in set (0.009 sec)
```

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.

```
+----------+-------------------+
| train_no | train_name        |
+----------+-------------------+
|    25260 | Chennai Mail      |
|    58450 | MAN-BEN Express   |
|    62620 | CHE-BEN Shatabdi  |
|    62621 | BEN-CHE Shatabdi  |
+----------+-------------------+
4 rows in set, 30 warnings (0.006 sec)
```

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

```
+--------------+
| passenger_id |
+--------------+
| USR_002      |
| ADM_001      |
| ADM_001      |
| USR_002      |
+--------------+
4 rows in set (0.001 sec)
```