

DBMS Lab 7

UNION, INTERSECTION, MINUS operators

GAURAV MAHAJAN PES1UG20CS150 SECTION C

```
MariaDB [PES1UG20CS150_RRS_UPDATED]> INSERT INTO ticket (PNR, Train_No, Travel_date, Passenger_id,
-> arrival_time, departure_time, Train_Type, compartment_type,
-> compartment_No, arrival, departure)
-> VALUES ('PNR021', 62621, '2021-10-22', 'USR_008', '20:30:00',
-> '16:00:00', 'Superfast', 'I Class', 'F01', 'Chennai',
-> 'Bengaluru' );
Query OK, 1 row affected (0.045 sec)

MariaDB [PES1UG20CS150_RRS_UPDATED]> update train set source =trim(source),destination = trim(destination);
Query OK, 2 rows affected (0.012 sec)
Rows matched: 6 Changed: 2 Warnings: 0
```

1. Find the list of passengers (user_id, user_type First name and last name) who have traveled from Bengaluru to Chennai during the month of Oct 2021 and Aug 2022.

```
MariaDB [PES1UG20CS150_RRS_UPDATED]> select tu.user_id,tu.user_type,tu.firstname,tu.lastname from train_user as tu natural
join (select passenger_id as user_id from ticket where departure ='Bengaluru' and arrival ='Chennai' and travel_date
in ((select travel_date from ticket where travel_date like '2022-08%'))union(select travel_date from ticket where travel_
date like '2021-10%')) as y;
+-----+-----+-----+-----+
| user_id | user_type | firstname | lastname |
+-----+-----+-----+-----+
| ADM_001 | ADMIN    | Narendra  | Modi     |
| USR_008 | PSGR     | Ajit      | Sethi    |
+-----+-----+-----+-----+
2 rows in set (0.001 sec)
```

2. Find the list of passengers (user_id, user_type First name and last name) who have traveled from Bengaluru to Chennai during the month of Oct 2021 and also during Aug 2022.

```
MariaDB [PES1UG20CS150_RRS_UPDATED]> select tu.user_id,tu.user_type,tu.firstname,tu.lastname from train_user tu natural
join(select passenger_id as user_id from ticket where departure ="Bengaluru" and arrival="Chennai" and passenger_id in (
(select passenger_id from ticket where travel_date like '2022-08%') intersect (select passenger_id from ticket where tra
vel_date like '2021-10%' ))) as y;
+-----+-----+-----+-----+
| user_id | user_type | firstname | lastname |
+-----+-----+-----+-----+
| USR_008 | PSGR     | Ajit      | Sethi    |
+-----+-----+-----+-----+
1 row in set (0.001 sec)
```

3. Find the list of passengers (user_id, user_type First name and last name) who have traveled from Bengaluru to Chennai during the month of Aug 2022 and not in Oct 2021.

```
MariaDB [PES1UG20CS150_RRS_UPDATED]> select tu.user_id,tu.user_type,tu.firstname,tu.lastname from train_user tu natural
join(select passenger_id as user_id from ticket where departure ="Bengaluru" and arrival="Chennai" and passenger_id in (
(select passenger_id from ticket where travel_date like '2022-08%') except (select passenger_id from ticket where travel
_date like '2021-10%' ))) as y;
+-----+-----+-----+-----+
| user_id | user_type | firstname | lastname |
+-----+-----+-----+-----+
| ADM_001 | ADMIN    | Narendra  | Modi     |
+-----+-----+-----+-----+
1 row in set (0.001 sec)
```

4. Find the list of passengers (user_id, user_type, First name and last name) who have traveled from Bengaluru to Chennai and returned to Bengaluru within a week.

```

MariaDB [PES1UG20CS150_RRS_UPDATED]> select tu.user_id,tu.user_type,tu.firstname,tu.lastname from train_user as tu natural
join (select t.passenger_id as user_id from ticket t where t.departure ="Bengaluru" and t.arrival ="Chennai" and exists
(select t1.passenger_id from ticket t1 where t1.departure="Chennai" and t1.arrival="Bengaluru" and t.passenger_id=t1.
passenger_id and t.travel_date-t1.travel_date<=7)) as p;
+-----+-----+-----+-----+
| user_id | user_type | firstname | lastname |
+-----+-----+-----+-----+
| ADM_001 | ADMIN    | Narendra | Modi     |
+-----+-----+-----+-----+
1 row in set (0.001 sec)

```

5. Find the list of passengers (user_id, user_type, First name and last name) who have traveled from Bengaluru to Chennai and did not return to Bengaluru (in other words, only one way travel from Bengaluru to Chennai).

```

MariaDB [PES1UG20CS150_RRS_UPDATED]> select tu.user_id,tu.user_type,tu.firstname,tu.lastname from train_user as tu natural
join (select t.passenger_id as user_id from ticket t where t.departure ="Bengaluru" and t.arrival ="Chennai" and not
exists (select t1.passenger_id from ticket t1 where t1.departure="Chennai" and t1.arrival="Bengaluru" and t.passenger_id
=t1.passenger_id)) as p;
+-----+-----+-----+-----+
| user_id | user_type | firstname | lastname |
+-----+-----+-----+-----+
| USR_008 | PSGR     | Ajit     | Sethi    |
+-----+-----+-----+-----+
1 row in set (0.002 sec)

```