DBMS LAB 7

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Section: 5K

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

```
Command Prompt - mysql -u root

MariaDB [cs667_rr]> select u.user_id,
    ->        u.user_type,
    ->        u.fname,
    ->        u.lname
    -> from user u
    ->        join ticket t on u.user_id = t.user_id
    -> where MONTH(t.travel_date) = 10
    ->        and YEAR(t.travel_date) = 2021
    ->        and departure = "Bengaluru"
    ->        and arrival = "Chennai"
    -> union
    -> select u.user_id,
    ->        u.user_type,
    ->        u.fname,
    ->        u.lname
    -> from user u
    ->        join ticket t on u.user_id = t.user_id
    -> where MONTH(t.travel_date) = 8
    ->        and YEAR(t.travel_date) = 2022
    ->        and departure = "Bengaluru"
    ->        and arrival = "Chennai";
+---------+-----------+----------+-------+
| user_id | user_type | fname    | lname |
+---------+-----------+----------+-------+
| USR_008 | PSGR      | Ajit     | Sethi |
| ADM_001 | ADMIN     | Narendra | Modi  |
+---------+-----------+----------+-------+
2 rows in set (0.001 sec)

MariaDB [cs667_rr]>
```

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

```
Command Prompt - mysql  -u root
MariaDB [cs667_rr]> select u1.user_id,
    ->      u1.user_type,
    ->      u1.fname,
    ->      u1.lname
    -> from user u1
    ->      join ticket t on u1.user_id = t.user_id
    -> where departure = "Bengaluru"
    ->      and arrival = "Chennai"
    ->      and MONTH(t.travel_date) = 10
    ->      and YEAR(t.travel_date) = 2021
    ->      and exists(
    ->          select u2.user_id,
    ->              u2.user_type,
    ->              u2.fname,
    ->              u2.lname
    ->          from user u2
    ->              join ticket t2 on u2.user_id = t2.user_id
    ->          where departure = "Bengaluru"
    ->              and arrival = "Chennai"
    ->              and MONTH(t2.travel_date) = 8
    ->              and YEAR(t2.travel_date) = 2022
    ->              and u1.user_id = u2.user_id
    ->      );
Empty set (0.005 sec)

MariaDB [cs667_rr]>
```

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

```
Command Prompt - mysql -u root
MariaDB [cs667_rr]> select u1.user_id,
    ->      u1.user_type,
    ->      u1.fname,
    ->      u1.lname
    -> from user u1
    ->      join ticket t on u1.user_id = t.user_id
    -> where departure = "Bengaluru"
    ->      and arrival = "Chennai"
    ->      and MONTH(t.travel_date) = 8
    ->      and YEAR(t.travel_date) = 2022
    ->      and not exists(
    ->          select u2.user_id,
    ->              u2.user_type,
    ->              u2.fname,
    ->              u2.lname
    ->          from user u2
    ->              join ticket t2 on u2.user_id = t2.user_id
    ->          where departure = "Bengaluru"
    ->              and arrival = "Chennai"
    ->              and MONTH(t2.travel_date) = 10
    ->              and YEAR(t2.travel_date) = 2021
    ->              and u1.user_id = u2.user_id
    ->      );
+---------+-----------+-----------+-------+
| user_id | user_type | fname     | lname |
+---------+-----------+-----------+-------+
| ADM_001 | ADMIN     | Narendra  | Modi  |
+---------+-----------+-----------+-------+
1 row in set (0.003 sec)

MariaDB [cs667_rr]> _
```

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.

```
Command Prompt - mysql -u root

MariaDB [cs667_rr]> select u1.user_id,
    ->      u1.user_type,
    ->      u1.fname,
    ->      u1.lname
    -> from user u1
    -> where u1.user_id = (
    ->          select distinct t1.user_id
    ->          from ticket t1
    ->          where t1.departure = "Bengaluru"
    ->              and t1.arrival = "Chennai"
    ->              and exists(
    ->                  select t2.user_id
    ->                  from ticket t2
    ->                  where t1.user_id = t2.user_id
    ->                      and t2.departure = "Chennai"
    ->                      and t2.arrival = "Bengaluru"
    ->                      and datediff(t2.travel_date, t1.travel_date) < 8
    ->              )
    ->      );
+----------+------------+----------+---------+
| user_id  | user_type  | fname    | lname   |
+----------+------------+----------+---------+
| ADM_001  | ADMIN      | Narendra | Modi    |
+----------+------------+----------+---------+
1 row in set (0.001 sec)

MariaDB [cs667_rr]>
```

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)

```
Command Prompt - mysql -u root
MariaDB [cs667_rr]> select u.user_id,
    ->      user_type,
    ->      fname,
    ->      lname
    -> from user u
    ->      join ticket as t on u.user_id = t.user_id
    -> where departure = 'Bengaluru'
    ->      and arrival = 'Chennai'
    ->      and not exists(
    ->          select u.user_id,
    ->              user_type,
    ->              fname,
    ->              lname
    ->          from user as u
    ->              join ticket as t on u.user_id = t.user_id
    ->          where departure = 'Chennai'
    ->              and arrival = 'Bengaluru'
    ->      );
Empty set (0.001 sec)

MariaDB [cs667_rr]>
```