

DBMS Lab 7

UNION, INTERSECTION, MINUS operators

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

```
MariaDB [cs_peslug20cs648_railways]> Select user_id, user_type, firstname, lastname from ticket, train_user where ticket.passenger_id = train_user.user_id and departure='Bengaluru' and arrival='Chennai' and (travel_date like '2021-10-%' )
-> UNION
-> Select user_id, user_type, firstname, lastname from ticket, train_user where ticket.passenger_id = train_user.user_id and departure='Bengaluru' and arrival='Chennai' and (travel_date like '2022-08-%' );
+-----+-----+-----+-----+
| user_id | user_type | firstname | lastname |
+-----+-----+-----+-----+
| USR_008 | PSGR      | Ajit      | Sethi    |
| ADM_001 | ADMIN     | Narendra  | Modi     |
+-----+-----+-----+-----+
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 [cs_peslug20cs648_railways]> Select user_id, user_type, firstname, lastname from ticket, train_user where ticket.passenger_id = train_user.user_id and departure='Bengaluru' and arrival='Chennai' and (travel_date like '2021-10-%')
-> INTERSECT
-> Select user_id, user_type, firstname, lastname from ticket, train_user where ticket.passenger_id = train_user.user_id and departure='Bengaluru' and arrival='Chennai' and (travel_date like '2022-08-%');
Empty set (0.015 sec)
```

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

```
MariaDB [cs_peslug20cs648_railways]> Select user_id, user_type, firstname, lastname from ticket, train_user where ticket.passenger_id = train_user.user_id and departure='Bengaluru' and arrival='Chennai' and (travel_date like '2022-08-%')
-> EXCEPT
-> Select user_id, user_type, firstname, lastname from ticket, train_user where ticket.passenger_id = train_user.user_id and departure='Bengaluru' and arrival='Chennai' and (travel_date like '2021-10-%');
+-----+-----+-----+-----+
| 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 travelled from Bengaluru to Chennai and returned to Bengaluru within a week.

```

MariaDB [cs_peslug20cs648_railways]> Select user_id, user_type, firstname, lastname from ticket as t1
, train_user where t1.passenger_id = train_user.user_id and departure='Bengaluru' and arrival='Chennai'
and user_id IN
    -> (select user_id from train_user, ticket as t2 where t2.passenger_id = train_user.user_id and arrival='Bengaluru'
and t2.travel_date-t1.travel_date <=7);
+-----+-----+-----+-----+
| user_id | user_type | firstname | lastname |
+-----+-----+-----+-----+
| ADM_001 | ADMIN    | Narendra | Modi     |
+-----+-----+-----+-----+
1 row in set (0.003 sec)

```

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

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MariaDB [cs_peslug20cs648_railways]> Select user_id, user_type, firstname, lastname from ticket, train_user
where ticket.passenger_id = train_user.user_id and departure='Bengaluru' and arrival='Chennai'

-> EXCEPT
-> Select user_id, user_type, firstname, lastname from ticket, train_user where ticket.passenger_id =
train_user.user_id and arrival='Bengaluru';
+-----+-----+-----+-----+
| user_id | user_type | firstname | lastname |
+-----+-----+-----+-----+
| USR_008 | PSGR     | Ajit     | Sethi    |
+-----+-----+-----+-----+
1 row in set (0.001 sec)

```