

UE20CS301

Database Management System

Lab 7 – Union, Intersection and Minus

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Roll No. : 13

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 [railway_system]> select UserID, U_TYPE, PNR, Fname, Lname from (ticket_331 NATURAL JOIN User_331) where arrival='Chennai' and departure='Bengaluru' and MONTH(TravelDate)=8 and YEAR(TravelDate)=2022
-> UNION
-> select UserID, U_TYPE, PNR, Fname, Lname from (ticket_331 NATURAL JOIN User_331) where arrival='Chennai' and departure='Bengaluru' and MONTH(TravelDate)=10 and YEAR(TravelDate)=2021;
```

UserID	U_TYPE	PNR	Fname	Lname
ADM_001	ADMIN	PNR001	Narendra	Modi
USR_008	PSGR	PNR021	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 travelled from Bengaluru to Chennai during the month of Oct 2021 and also during Aug 2022

```
MariaDB [railway_system]> select UserID, U_TYPE, PNR, Fname, Lname from (ticket_331 NATURAL JOIN User_331) where arrival='Chennai' and departure='Bengaluru' and MONTH(TravelDate)=8 and YEAR(TravelDate)=2022
-> INTERSECT
-> select UserID, U_TYPE, PNR, Fname, Lname from (ticket_331 NATURAL JOIN User_331) where arrival='Chennai' and departure='Bengaluru' and MONTH(TravelDate)=10 and YEAR(TravelDate)=2021;
```

Empty set (0.001 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 [railway_system]> select UserID, U_TYPE, PNR, Fname, Lname from (ticket_331 NATURAL JOIN User_331) where arrival='Chennai' and departure='Bengaluru' and MONTH(TravelDate)=8 and YEAR(TravelDate)=2022
-> EXCEPT
-> select UserID, U_TYPE, PNR, Fname, Lname from (ticket_331 NATURAL JOIN User_331) where arrival='Chennai' and departure='Bengaluru' and MONTH(TravelDate)=10 and YEAR(TravelDate)=2021;
```

UserID	U_TYPE	PNR	Fname	Lname
ADM_001	ADMIN	PNR001	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 [railway_system]> select u.UserID, U_Type, FName, LName from ticket_331 as t, user_331 as u where t.UserID = u.UserID and t.Departure = 'Bengaluru' and t.Arrival = 'Chennai'
-> AND EXISTS (select pnr from ticket_331 as ti where t.UserID = ti.UserID and ti.Departure = 'Chennai'
and ti.Arrival = 'Bengaluru' and (DATEDIFF(ti.TravelDate,t.TravelDate) BETWEEN 0 and 7));
+-----+-----+-----+-----+
| UserID | U_Type | FName   | LName |
+-----+-----+-----+-----+
| 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 travelled from Bengaluru to Chennai and did not return to Bengaluru (in other words, only one way travel from Bengaluru to Chennai)

```
MariaDB [railway_system]> select UserID, U_TYPE, FName, Lname from (ticket_331 NATURAL JOIN User_331) where arrival='Chennai' and departure='Bengaluru'
-> EXCEPT
-> select UserID, U_TYPE, FName, Lname from (ticket_331 NATURAL JOIN User_331) where arrival='Bengaluru'
and departure='Chennai';
+-----+-----+-----+-----+
| UserID | U_TYPE | FName | Lname |
+-----+-----+-----+-----+
| USR_008 | PSGR   | Ajit  | Sethi |
+-----+-----+-----+-----+
1 row in set (0.003 sec)
```