

EXPERIMENT NO: - 006

SQL Queries: The queries should involve Set Operations and Set Comparisons.

```
use RMS_2;
select database ();
select * From Ticket;
select * from Passenger;
select * from Train;
```

Set Operations: - Union

```
select PNR;
from Passenger union select PNR from Ticket;
select PNR
from Passenger
union all
select PNR from Ticket;
```

```
select PNR
from Passenger
union all
select PNR
from Ticket
order by PNR desc;
```

Set Operations: - Intersect

```
select Passenger.P_name, Ticket.Tktamt
from Passenger
join ticket
on Passenger.PNR = Ticket.PNR;
```

Join on select

```
Train.Trainno,Tname
from Ticket join Train
on Train.Trainno = Ticket.Trainno;
```

Left join

```
select Ticket.Trainno,Tname from Ticket
left join Train on Train.Trainno=Ticket.Trainno;
```

Right join

```
select Train.Trainno,Tname
from Ticket
right join Train
on Train.Trainno=Ticket.Trainno;
```

Set comparison

```
select P_name
from Passenger
where Age > some (select Age from Passenger where Gender='Male');
```

```
select P_name
from Passenger
where Age > any (select Age from Passenger where Gender='Male');
```

```
select P_name
from Passenger
where Age > all (select Age from Passenger where Gender='Male');
```

```
# Set Membership - IN, NOT IN
select *
from Train
where Class in('Sleeper');
```

```
select *
from Train
where Class not in('Sleeper');
```

```
select *
from Train
where Class in ('Sleeper', 'AC');
```

#Output: -

Enter password: ****

Welcome to the MySQL monitor. Commands end with; or \g. Your MySQL connection id is 35

Server version: 8.0.27 MySQL Community Server - GPL

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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement. mysql> use RMS_2;

Database changed

mysql> select database ();

```
+      +
| database () |
+      +
| rms_2 |
+      +
1 row in set (0.00 sec)
```

mysql> select * from Ticket;

```
+      +      +      +      +      +      +      +      +
| PNR  | Ticket_ID | Arrtime | Deptime | Trainno | Tktamt | Seat_no | Reserve_status
|
+      +      +      +      +      +      +      +      +
| 308123905 | 596 | 20:04:15 | 20:07:19 | 21673 | 420 | 70 | CNF |
| 1265577771 | 136 | 12:47:10 | 12:50:10 | 22154 | 376 | 15 | CNF |
| 1975364587 | 245 | 07:40:15 | 07:45:58 | 19134 | 298 | 63 | CNF |
| 2110755678 | 169 | 16:20:38 | 16:24:34 | 27139 | 380 | 37 | CNF |
```

```
| 2120017791 | 101 | 04:35:10 | 04:40:10 | 12139 | 289 | 12 | CNF |
+ + + + + + + + + 5 rows in set (0.00 sec)
```

```
mysql> select * from Passenger;
```

```
+ + + + + + +
| P_ID | P_name | Age | Gender | Ticket_ID | PNR |
+ + + + + + +
| 201 | John | 21 | Male | 596 | 308123905 |
| 239 | Alice | 29 | Female | 245 | 1975364587 |
| 340 | Jenny | 32 | Female | 169 | 2110755678 |
| 367 | Tony | 24 | Male | 101 | 2120017791 | +-----+-----+-----+-----+-----
+ +
4 rows in set (0.00 sec)
```

```
mysql> select * from Train;
```

```
+ + + + + + +
| Trainno | Tname | Type | Class | Status_ID | Coach_ID |
+ + + + + + +
| 11071 | Kamyani Express | Superfast | Sleeper | 233 | S2 |
| 12124 | Rajdhani Express | Express | AC | 233 | A1 |
| 12139 | Sewagram Express | Express | Sleeper | 255 | S5 |
| 12178 | Gitanjali Express | Superfast | Sleeper | 193 | S7 |
| 21353 | Pungab Mail | Superfast | AC | 193 | A2 |
+ + + + + + + 5 rows in set (0.00 sec)
```

```
mysql> select PNR from Passenger
```

```
-> union
```

```
-> select PNR from Ticket;
```

```
+ +
| PNR |
+ +
| 308123905 |
| 1975364587 |
| 2110755678 |
| 2120017791 |
| 1265577771 |
+ +
5 rows in set (0.00 sec)
```

```
mysql> select PNR from Passenger
```

```
-> union all
```

```
-> select PNR from Ticket;
```

```
+ +
| PNR |
+ +
| 308123905 |
| 1975364587 |
| 2110755678 |
| 2120017791 |
```

308123905
1265577771
1975364587
2110755678

2120017791

+	+
---	---

9 rows in set (0.00 sec)

```
mysql> select PNR from Passenger
```

```
-> union all
```

```
-> select PNR from Ticket
```

```
-> order by PNR desc;
```

+	+
---	---

PNR

+	+
---	---

2120017791

2120017791

2110755678

2110755678

1975364587

1975364587

1265577771

308123905

308123905

+	+
---	---

9 rows in set (0.00 sec)

```
mysql> select Passenger.P_name, Ticket.Tktamt
```

```
-> from Passenger
```

```
-> join ticket
```

```
-> on Passenger.PNR = Ticket.PNR;
```

+	+	+
---	---	---

P_name	Tktamt
--------	--------

+	+	+
---	---	---

John	420	Alice	298
------	-----	-------	-----

Jenny	380	Tony	289
-------	-----	------	-----

+	+	+
---	---	---

4 rows in set (0.00 sec)

```
mysql> select Train.Trainno,Tname
```

```
-> from Ticket join Train
```

```
-> on Train.Trainno = Ticket.Trainno;
```

+	+	+
---	---	---

Trainno	Tname
---------	-------

+	+	+
---	---	---

12139	Sewagram Express
-------	------------------

+	+	+
---	---	---

+ 1 row in set (0.00 sec)

```
mysql> select Ticket.Trainno,Tname
```

```

-> from Ticket
-> left join Train on Train.Trainno=Ticket.Trainno;
+      +      +
| Trainno | Tname      |
+      +      +
|      21673 | NULL      |
|      22154 | NULL      |
|      19134 | NULL      |
|      27139 | NULL      |
|      12139 | Sewagram Express |
+      +      + 5 rows in set (0.00 sec)

```

```

mysql> select Train.Trainno,Tname
-> from Ticket
-> right join Train on Train.Trainno=Ticket.Trainno;
+      +      +
| Trainno | Tname      |
+      +      +
|      11071 | Kamyani Express      |
|      12124 | Rajdhani Express |
|      12139 | Sewagram Express |
|      12178 | Gitanjali Express |
|      21353 | Pungab Mail      |
+      +      + 5 rows in set (0.00 sec)

```

```

mysql> select P_name
-> from Passenger
-> where Age > some
-> (select Age from Passenger where Gender='Male');
+      +
| P_name |
+      +
| Alice |
| Jenny |
| Tony  |
+      +
3 rows in set (0.00 sec)

```

```

mysql> select P_name
-> from Passenger
-> where Age > any
-> (select Age from Passenger where Gender='Male');
+      +
| P_name |
+      +
| Alice |
| Jenny |
| Tony  |
+      +

```

3 rows in set (0.00 sec)

```
mysql> select P_name
-> from Passenger
-> where Age > all
-> ^C
```

```
mysql> (select Age from Passenger where Gender='Male'); +      +
| Age |
```

```
+-----+
|      21 |
|      24 |
+      +
```

2 rows in set (0.00 sec)

```
mysql> select * from Train
-> where Class in('Sleeper');
```

```
+      +      +      +      +      +
| Trainno | Tname      | Type | Class | Status_ID | Coach_ID |
+      +      +      +      +      +
|      11071 | Kamyani Express | Superfast | Sleeper | 233 | S2
|      12139 | Sewagram Express | Express | Sleeper | 255 | S5
|      12178 | Gitanjali Express | Superfast | Sleeper | 193 | S7
+      +      +      +      +      + 3 rows in set (0.00 sec)
```

```
mysql> select * from Train
-> where Class not in('Sleeper');
```

```
+      +      +      +      +      +
| Trainno | Tname      | Type | Class | Status_ID | Coach_ID |
+      +      +      +      +      +
|      12124 | Rajdhani Express | Express | AC | 233 | A1
|      21353 | Pungab Mail | Superfast | AC | 193 | A2
+      +      +      +      +      + 2 rows in set (0.00 sec)
```

```
mysql> where Class not in('Sleeper');
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'where Class not in('Sleeper')' at line 1
mysql> select * from Train
```

```
-> where Class in('Sleeper', 'AC');
```

```
+      +      +      +      +      +
| Trainno | Tname      | Type | Class | Status_ID | Coach_ID |
+      +      +      +      +      +
|      11071 | Kamyani Express | Superfast | Sleeper | 233 | S2
|      12124 | Rajdhani Express | Express | AC | 233 | A1
|      12139 | Sewagram Express | Express | Sleeper | 255 | S5
|      12178 | Gitanjali Express | Superfast | Sleeper | 193 | S7
|      21353 | Pungab Mail | Superfast | AC | 193 | A2
+      +      +      +      +      + 5 rows in set (0.00 sec)
```