

# Experiment No. 5  
# SQL Queries: The queries should involve SQL feature such as aggregate functions, group by clause, having clause, order by clause

```
use RMS_2;  
select database();
```

#Aggregate functions:-

```
select * from ticket;  
select avg(Tktamt) from Ticket;  
select avg(Tktamt) as Avg_Tkt_Amt from Ticket;  
select min(Tktamt)from Ticket;  
select max(Tktamt)from Ticket;  
select sum(Tktamt) as Total_Amt from Ticket;  
select count(P_ID) as No_Of_Passengers from Passenger;
```

# use of logical conditions

```
select* from passenger;
```

```
select * from Passenger  
where Age between 20 and 22 AND Gender='Male';  
select * from Passenger  
where Age between 20 and 30 AND(Gender='Male' OR Gender='Female');
```

# use of order by clause

```
select * from Passenger order by P_name;  
select * from Passenger order by P_name desc;  
select * from Passenger order by Gender asc;  
select * from Passenger order by Gender asc,  
P_ID desc;
```

# use of Grpoup by clause

```
select * from Passenger;  
select Gender,avg(Age) from Passenger group by Gender;  
select Gender,count(P_ID) as No_Of_Passengers from Passenger group by  
Gender;
```

# use of having clause

```
select Gender,avg(Age) as Avg_Age from Passenger group by Gender having  
Avg_Age >30;  
select Passenger.Gender,avg(Ticket.Tktamt)as Avg_Amt from (Ticket inner
```

```
join Passenger on Ticket.PNR=Passenger.PNR) group by Gender having
avg(Tktamt)>350;
```

```
#-----
-----
```

#Output:

Enter password: \*\*\*\*\*

Welcome to the MySQL monitor. Commands end with ; or \g. Your MySQL  
connection id is 4

Server version: 5.7.32-log 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 * from ticket;
```

```
+-----+-----+-----+-----+-----+-----+-----+
+-----+
| PNR      | Ticket_ID | Arrrtime | Deptime | Trainno | Tktamt | Seat_no |
| Reserve_status |
+-----+-----+-----+-----+-----+-----+-----+
+-----+
| 308123905 |          | 596 | 20:04:15 | 20:07:19 | 420 | 70 |
| CNF      |          |
| 1265577771 |          | 136 | 12:47:10 | 12:50:10 | 376 | 15 |
| CNF      |          |
| 1975364587 |          | 245 | 07:40:15 | 07:45:58 | 298 | 63 |
| CNF      |          |
| 2110755678 |          | 169 | 16:20:38 | 16:24:34 | 380 | 37 |
| CNF      |          |
| 2120017791 |          | 101 | 04:35:10 | 04:40:10 | 289 | 12 |
| CNF      |          |
+-----+-----+-----+-----+-----+-----+-----+
+-----+
5 rows in set (0.0038 sec)
```

```
mysql> select avg(Tktamt) from Ticket;
```

```
+-----+
| avg(Tktamt) |
+-----+
|    352.6000 |
+-----+
```

```
1 row in set (0.0026 sec)
```

```
mysql> select avg(Tktamt) as Avg_Tkt_Amt from Ticket;
```

```
+ +-----+
| Avg_Tkt_Amt |
+-----+
|    352.6000 |
+-----+
```

```
1 row in set (0.0028 sec)
```

```
mysql> select min(Tktamt)from Ticket;
```

```
+-----+
| min(Tktamt) |
+-----+
|          289 |
+-----+
```

```
1 row in set (0.0028 sec)
```

```
mysql> select max(Tktamt)from Ticket;
```

```
+-----+
| max(Tktamt) |
+-----+
|          420 |
+-----+
```

```
1 row in set (0.0023 sec)
```

```
mysql> select sum(Tktamt) as Total_Amt from Ticket;
```

```
+-----+
| Total_Amt |
+-----+
|        1763 |
+-----+
```

```
1 row in set (0.0031 sec)
```

```
mysql> select count(P_ID) as No_Of_Passengers from Passenger;
```

```
+-----+
| No_Of_Passengers |
+-----+
|                5 |
+-----+
1 row in set (0.0084 sec)
```

```
mysql> select * from passenger;
```

```
+-----+-----+-----+-----+-----+-----+
| P_ID | P_name | Age | Gender | Ticket_ID | PNR |
+-----+-----+-----+-----+-----+-----+
| 201 | John   | 21  | Male   | 596       | 308123905 |
| 217 | Mark   | 24  | Male   | 136       | 1265577771 |
| 239 | Alice  | 29  | Female | 245       | 1975364587 |
| 340 | Jenny  | 32  | Female | 169       | 2110755678 |
| 367 | Tony   | 24  | Male   | 101       | 2120017791 |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.0036 sec)
```

```
mysql> select * from Passenger where Age between 20 and 22 AND
Gender='Male';
```

```
+-----+-----+-----+-----+-----+-----+
| P_ID | P_name | Age | Gender | Ticket_ID | PNR |
+-----+-----+-----+-----+-----+-----+
| 201 | John   | 21  | Male   | 596       | 308123905 |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.0037 sec)
```

```
mysql> select * from Passenger where Age between 20 and 30
AND(Gender='Male' OR Gender='Female');
```

```
+-----+-----+-----+-----+-----+-----+
| P_ID | P_name | Age | Gender | Ticket_ID | PNR |
+-----+-----+-----+-----+-----+-----+
| 201 | John   | 21  | Male   | 596       | 308123905 |
| 217 | Mark   | 24  | Male   | 136       | 1265577771 |
| 239 | Alice  | 29  | Female | 245       | 1975364587 |
| 367 | Tony   | 24  | Male   | 101       | 2120017791 |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.0044 sec)
```

```
mysql> select * from Passenger order by P_name;
```

P_ID	P_name	Age	Gender	Ticket_ID	PNR
239	Alice	29	Female	245	1975364587
340	Jenny	32	Female	169	2110755678
201	John	21	Male	596	308123905
217	Mark	24	Male	136	1265577771
367	Tony	24	Male	101	2120017791

5 rows in set (0.0026 sec)

```
mysql> select * from Passenger order by P_name desc;
```

P_ID	P_name	Age	Gender	Ticket_ID	PNR
367	Tony	24	Male	101	2120017791
217	Mark	24	Male	136	1265577771
201	John	21	Male	596	308123905
340	Jenny	32	Female	169	2110755678
239	Alice	29	Female	245	1975364587

5 rows in set (0.0027 sec)

```
mysql> select * from Passenger order by Gender asc;
```

P_ID	P_name	Age	Gender	Ticket_ID	PNR
239	Alice	29	Female	245	1975364587
340	Jenny	32	Female	169	2110755678
201	John	21	Male	596	308123905
217	Mark	24	Male	136	1265577771
367	Tony	24	Male	101	2120017791

5 rows in set (0.0026 sec)

```
mysql> select * from Passenger order by Gender asc, P_ID desc;
```

P_ID	P_name	Age	Gender	Ticket_ID	PNR
340	Jenny	32	Female	169	2110755678
239	Alice	29	Female	245	1975364587
367	Tony	24	Male	101	2120017791

217	Mark	24	Male	136	1265577771
201	John	21	Male	596	308123905

5 rows in set (0.0021 sec)

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

P_ID	P_name	Age	Gender	Ticket_ID	PNR
201	John	21	Male	596	308123905
217	Mark	24	Male	136	1265577771
239	Alice	29	Female	245	1975364587
340	Jenny	32	Female	169	2110755678
367	Tony	24	Male	101	2120017791

5 rows in set (0.0026 sec)

```
mysql> select Gender,avg(Age) from Passenger group by Gender;
```

gender	avg(Age)
Male	23.0000
Female	30.5000

2 rows in set (0.0043 sec)

```
mysql> select Gender,count(P_ID) as No_Of_Passengers from Passenger group by Gender;
```

gender	No_Of_Passengers
Male	3
Female	2

2 rows in set (0.0029 sec)

```
mysql> select Gender,avg(Age) as Avg_Age from Passenger group by Gender having Avg_Age >30;
```

gender	Avg_Age
Female	30.5000

1 row in set (0.0031 sec)

```
mysql> select Passenger.Gender,avg(Ticket.Tktamt)as Avg_Amt from (Ticket
inner join Passenger on Ticket.PNR=Passenger.PNR) group by Gender having
avg(Tktamt)>350;
```

gender	Avg_Amt
Male	361.6667

1 row in set (0.0044 sec)