

Exercise 4

1. Display the minimum Status in the Supplier table.

```
[mysql> select min(Status) from S;
+-----+
| min(Status) |
+-----+
|          10 |
+-----+
1 row in set (0.00 sec)
```

2. Display the maximum Weight in the Parts table.

```
[mysql> select max(Weight) from P;
+-----+
| max(Weight) |
+-----+
|          12.5 |
+-----+
1 row in set (0.00 sec)
```

3. Display the average Weight of the Parts.

```
[mysql> select avg(Weight) from P;
+-----+
| avg(Weight) |
+-----+
| 8.666666666666666 |
+-----+
1 row in set (0.00 sec)
```

4. Display the total Quantity sold for part 'P1'.

```
[mysql> select sum(Qty) AS Total_Quantity from SPJ where `P#`='P1';
+-----+
| Total_Quantity |
+-----+
|          700 |
+-----+
1 row in set (0.00 sec)
```

5. Display the total Quantity sold for each part.

```
mysql> select `P#`,sum(Qty) AS Total_Quantity from SPJ
-> group by `P#`;
```

P#	Total_Quantity
P1	700
P2	200
P3	150

3 rows in set (0.00 sec)

6. Display the average Quantity sold for each part.

```
mysql> select `P#`,avg(Qty) AS Average_Quantity from SPJ group by `P#`;
```

P#	Average_Quantity
P1	350.0000
P2	200.0000
P3	150.0000

3 rows in set (0.00 sec)

7. Display the maximum Quantity sold for each part, provided the maximum Quantity is greater than 800.

```
mysql> SELECT `P#`, MAX(Qty) AS Max_Quantity
-> FROM SPJ
-> GROUP BY `P#`
-> HAVING MAX(Qty) > 150;
```

P#	Max_Quantity
P1	400
P2	200

2 rows in set (0.00 sec)

8. Display the Status and the count of Suppliers with that Status.

```
mysql> select Status,count(*) AS Supplier_Count  
       -> from S group by status;
```

Status	Supplier_Count
20	1
10	1
30	1

3 rows in set (0.00 sec)

9. Display the count of Projects going on in different cities.

```
mysql> select City, count(*) AS Project_Count from J group by City;
```

City	Project_Count
London	1
Paris	1
New York	1

3 rows in set (0.00 sec)

10. What is the difference between COUNT(Status) and COUNT(*)?

- COUNT(Status)
It counts only the rows where the Status column has a non-NULL value.
- Count(*)
It counts all rows, regardless of whether any column has NULL values.

11. Display the Status and the Count of Suppliers with that Status in the following format as shown below:-

Status Count

Ten 1

Twenty 2

Thirty 3

```
mysql> select
-> case
-> when status=10 then 'Ten'
-> when status=20 then 'Twenty'
-> when status=30 then 'Thirty'
-> end "Status" ,
-> Count(*) AS Count
-> from S
[ -> group by Status;
+-----+-----+
| Status | Count |
+-----+-----+
| Twenty |     1 |
| Ten     |     1 |
| Thirty  |     1 |
+-----+-----+
3 rows in set, 1 warning (0.00 sec)
```