## **SQL Exercise 4**

1. Display the minimum Status in the Supplier table.

```
mysql> select min(status) as min status from supplier;
+----+
| min status |
+----+
     10 |
+----+
1 row in set (0.00 \text{ sec})
mysql> select `S#`, sname, min(status) as min status from supplier group by `S#`,
sname;
+----+
| S# | sname | min status |
+----+
| S1 | Smith |
                 20 |
| S2 | Jones |
                 10 |
| S3 | Blake |
                 30 |
| S4 | Clark |
                20 |
| S5 | Adams |
                  25 |
| S6 | Alamo |
                 24 |
+----+
6 rows in set (0.03 \text{ sec})
```

2. Display the maximum Weight in the Parts table.

```
mysql> select max(weight) as weight_weight from parts;
+------+
| weight_weight |
+------+
| 17 |
+------+
1 row in set (0.01 sec)
```

mysql> select 'P#', pname, max(weight) as weight weight from parts group by ' P#\, pname; +----+ | P# | pname | weight | weight | +----+ | P1 | Nut | 12 | | P2 | Bolt | 17 | P3 | Screw | 14 | P4 | Washer | 12 | | P5 | Nail | 10 | +----+ 5 rows in set (0.00 sec)3. Display the average Weight of the Parts. mysql> select avg(weight) as avgweight from parts; +----+ avgweight +----+ | 13 | +----+ 1 row in set (0.02 sec)4. Display the total Quantity sold for part 'P1'. mysql> select sum(quentitysold) as total quentity from sales where pnum = 'P1' +----+ | totalquentity | +----+ 37 | +----+ 1 row in set (0.00 sec) 5. Display the total Quantity sold for each part. mysql> select pnum, sum(quentitysold) as total quantity from sales group by pnum; +----+ | pnum | totalquantity |

+	-++
P1	37
P2	5
P3	8
P4	8
P5	9
+	-++
5 rows in set (0.00 sec)	

5 rows in set (0.00 sec)

6. Display the average Quantity sold for each part.

mysql> select pnum, avg(quentitysold) as avgquentity from sales group by pnum;

```
+----+
| pnum | avgquentity |
+----+
| P1 | 12.3333 |
| P2 |
       5.0000 |
| P3 |
       8.0000 |
| P4 |
       8.0000 |
| P5 |
       9.0000 |
+----+
5 rows in set (0.00 \text{ sec})
```

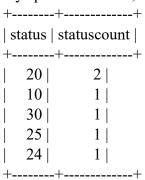
7. Display the maximum Quantity sold for each part, provided the maximum Quantity is greater than 800.

mysql> select pnum, max(quentitysold) as maxquantity from sales group by pnum having max(quentitysold) > 800;

```
+----+
| pnum | maxquantity |
+----+
| P3 |
        900 |
| P6 |
       1000 |
+----+
2 rows in set (0.00 sec)
```

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

mysql> select status, count(\*) as statuscount from supplier group by status;



5 rows in set (0.00 sec)

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

mysql> select city as City, count(\*) as projectcount from projects group by c ity:

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

## **COUNT(Status)**

- **Counts Non-NULL Values**: This function counts only the number of rows where the Status column has a non-NULL value.
- Example Use Case: If you have a table where some rows have NULL in the Status column, COUNT(Status) will return a count of only those rows that contain actual values (i.e., non-NULL).

## COUNT(\*)

- Counts All Rows: This function counts all rows in the result set, regardless of whether any column values are NULL or not.
- Example Use Case: It is often used to get the total number of rows in a table or result set without any conditions.

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

```
Status Count
Ten
          1
          2
Twenty
          3
Thirty
mysql> select
  -> case
  -> when status = 10 then 'Ten'
  -> when status = 20 then 'Twenty'
  -> when status = 25 then 'TwentyFive'
  -> when status = 24 then 'TwentyFour'
  -> else 'other'
  -> end as Status,
  -> count(*) as Count
  -> from supplier
  -> group by Status
  -> order by Status;
+----+
| Status | Count |
+----+
other
            1 |
            1 |
| Ten
| Twenty |
             2 |
| TwentyFive |
               1 |
| TwentyFour |
               1 |
+----+
5 rows in set, 1 warning (0.02 sec)
```