SQL Exercise 4

1. Display the minimum Status in the Supplier table.
   Ans:

   SELECT MIN(Status) FROM Supplier ;

```
mysql> SELECT MIN(Status) FROM Supplier ;
+-------------+
| MIN(Status) |
+-------------+
|           8 |
+-------------+
1 row in set (0.00 sec)
```

2. Display the maximum Weight in the Parts table.
   Ans:

   SELECT MAX(Weight) FROM Part ;

```
mysql> SELECT MAX(Weight) FROM Part ;
+-------------+
| MAX(Weight) |
+-------------+
|       14.00 |
+-------------+
1 row in set (0.00 sec)
```

3. Display the average Weight of the Parts.
   Ans:

   SELECT AVG(Weight) FROM Part ;

```
mysql> SELECT AVG(Weight) FROM Part ;
+-------------+
| AVG(Weight) |
+-------------+
|    8.150000 |
+-------------+
1 row in set (0.00 sec)
```

4. Display the total Quantity sold for part ‘P1’.
   Ans:

   SELECT SUM(Quantity) AS Total Quantity
   FROM Sales
   WHERE PartID = ‘P1’;

```
mysql> SELECT SUM(Quantity) AS TotalQuantity
    -> FROM Sales
    -> WHERE PartID = 'P1';
+---------------+
| TotalQuantity |
+---------------+
|          NULL |
+---------------+
1 row in set, 1 warning (0.00 sec)
```

5. Display the total Quantity sold for each part.
   Ans:

   SELECT PartID, SUM(Quantity) FROM Sales GROUP BY PartID ;

```
mysql> SELECT PartID, SUM(Quantity) FROM Sales GROUP BY PartID ;
+--------+---------------+
| PartID | SUM(Quantity) |
+--------+---------------+
|      1 |          1450 |
|      2 |          2100 |
|      3 |          1850 |
|      4 |           750 |
|      5 |           650 |
|      6 |          2000 |
+--------+---------------+
6 rows in set (0.00 sec)
```

6. Display the average Quantity sold for each part.
   Ans:

   SELECT PartID AVG(Quantity) AS AvgQuantity FROM Sales GROUP BY PartID ;

```
mysql> SELECT PartID, AVG(Quantity) AS AvgQuantity
    -> FROM Sales
    -> GROUP BY PartID;
+--------+-------------+
| PartID | AvgQuantity |
+--------+-------------+
|      1 |    483.3333 |
|      2 |   1050.0000 |
|      3 |    925.0000 |
|      4 |    750.0000 |
|      5 |    650.0000 |
|      6 |   2000.0000 |
+--------+-------------+
6 rows in set (0.00 sec)
```

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

Ans:

```
SELECT PartID, MAX(Quantity) AS MaxQuantity
FROM Sales
GROUP BY PartID
HAVING MAX(Quantity) > 800;
```

```
mysql> SELECT PartID, MAX(Quantity) AS MaxQuantity
    -> FROM Sales
    -> GROUP BY PartID
    -> HAVING MAX(Quantity) > 800;
+--------+-------------+
| PartID | MaxQuantity |
+--------+-------------+
|      2 |        1200 |
|      3 |        1000 |
|      6 |        2000 |
+--------+-------------+
3 rows in set (0.00 sec)
```

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

Ans:

```
SELECT Status, count(*) AS SupplierCount FROM Supplier GROUP BY Status ;
```

```
mysql> SELECT Status, count(*) AS SupplierCount FROM Supplier GROUP BY Status ;
+--------+---------------+
| Status | SupplierCount |
+--------+---------------+
|     15 |             1 |
|     18 |             1 |
|     12 |             1 |
|     22 |             1 |
|      8 |             1 |
|     20 |             1 |
|     13 |             1 |
|     17 |             1 |
|     19 |             1 |
|      9 |             1 |
+--------+---------------+
10 rows in set (0.00 sec)
```

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

   SELECT City COUNT(*) AS ProjectCount FROM Project GROUP BY City;

```
mysql> SELECT City, COUNT(*) AS ProjectCount
    -> FROM Project
    -> GROUP BY City;
+-------------+--------------+
| City        | ProjectCount |
+-------------+--------------+
| New York    |            2 |
| Los Angeles |            2 |
| London      |            2 |
| Lagos       |            1 |
| Lisbon      |            2 |
| Berlin      |            1 |
+-------------+--------------+
6 rows in set (0.00 sec)
```

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

    COUNT(Status) only counts rows where the status is NOT NULL.
    COUNT(*) counts rows where including the NULL status.

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

Ans:

```
SELECT
CASE
WHEN Status = 10 THEN 'Ten
WHEN Status = 20 THEN 'Twenty'
WHEN Status = 30 THEN 'Thirty
ELSE CAST(Status AS VARCHAR)  -- For other status values, display the number
END AS StatusWord,
COUNT(*) AS Count
FROM Supplier
GROUP BY Status;
```

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