Experiment 5
DML Commands III

AIM:

Implementation of DQL queries involving multiple tables and various aggregate functions.

A Multi-Table Queries/SQL Joins

A.1 List the names of all clients who have viewed a property along with any comment supplied.

Output:

```
mysql> select fName,lName,comment from Client39 join Viewing39 where Client39.clientNo=Viewing39.clientno and
 Viewing39.comment!="";
+-------+---------+----------------+
| fName | lName   | comment        |
+-------+---------+----------------+
| Aline | Stewart | too small      |
| Mary  | Tregear | no dining room |
| John  | Kay     | too remote     |
+-------+---------+----------------+
3 rows in set (0.00 sec)
```

A.2 For each branch office, list the numbers and names of staff who manage properties and the properties that they manage.

Output:

```
mysql> select b.BranchNo,s.staffNo,s.Fname,p.propertyNo from Branch39 b,Staff39 s,PropertyForRent39 p where b
.BranchNo=s.BranchNo and s.staffNo=p.staffNo;
+----------+---------+-------+------------+
| BranchNo | staffNo | Fname | propertyNo |
+----------+---------+-------+------------+
| B007     | SA9     | Mary  | PA14       |
| B003     | SG14    | David | PG16       |
| B003     | SG37    | Ann   | PG21       |
| B003     | SG37    | Ann   | PG36       |
| B005     | SL41    | Julie | PL94       |
+----------+---------+-------+------------+
5 rows in set (0.00 sec)
```

A.3 For each branch, list the numbers and names of staff who manage properties, including the city in which the branch is located and the properties that the staff manages.

Output:

```
mysql> select b.BranchNo,s.staffNo,s.Fname,p.propertyNo,p.city from Branch39 b,Staff39 s,PropertyForRent39 p
where b.BranchNo=s.BranchNo and s.staffNo=p.staffNo and b.branchNo=p.branchNo;
+----------+---------+-------+------------+-----------+
| BranchNo | staffNo | Fname | propertyNo | city      |
+----------+---------+-------+------------+-----------+
| B007     | SA9     | Mary  | PA14       | Alberdeen |
| B003     | SG14    | David | PG16       | Glasgow   |
| B003     | SG37    | Ann   | PG21       | Glasgow   |
| B003     | SG37    | Ann   | PG36       | Glasgow   |
| B005     | SL41    | Julie | PL94       | London    |
+----------+---------+-------+------------+-----------+
5 rows in set (0.00 sec)
```

A.4 List all branch offices and any properties that are in the same city.

Output:

```
mysql> select Branch39.branchNo,propertyNo from Branch39 left join PropertyForRent39 on Branch39.city=Propert
yForRent39.city;
+----------+------------+
| branchNo | propertyNo |
+----------+------------+
| B002     | PL94       |
| B003     | PG4        |
| B003     | PG36       |
| B003     | PG21       |
| B003     | PG16       |
| B004     | NULL       |
| B005     | PL94       |
| B007     | NULL       |
+----------+------------+
8 rows in set (0.00 sec)
```

A.5 List all properties and any branch offices that are in the same city.

Output:

```
mysql> select propertyNo,Branch39.branchNo from Branch39 right join PropertyForRent39 on Branch39.city=Proper
tyForRent39.city;
+------------+----------+
| propertyNo | branchNo |
+------------+----------+
| PA14       | NULL     |
| PG16       | B003     |
| PG21       | B003     |
| PG36       | B003     |
| PG4        | B003     |
| PL94       | B005     |
| PL94       | B002     |
+------------+----------+
7 rows in set (0.00 sec)
```

A.6 List the branch offices and properties that are in the same city along with any unmatched branches or properties.

Output:

```
mysql> select Branch39.branchNo,propertyNo from Branch39 right outer join PropertyForRent39 on Branch39.city=
PropertyForRent39.city union select Branch39.branchNo,propertyNo from Branch39 left outer join PropertyForRen
t39 on Branch39.city=PropertyForRent39.city;
+----------+------------+
| branchNo | propertyNo |
+----------+------------+
| NULL     | PA14       |
| B003     | PG16       |
| B003     | PG21       |
| B003     | PG36       |
| B003     | PG4        |
| B005     | PL94       |
| B002     | PL94       |
| B004     | NULL       |
| B007     | NULL       |
+----------+------------+
9 rows in set (0.16 sec)
```

B Aggregate Functions.

7 How many properties cost more than 350 per month to rent?

Output:

```
mysql> select COUNT(rent) as numberofproperty from PropertyForRent39 where rent>350;
+------------------+
| numberofproperty |
+------------------+
|                5 |
+------------------+
1 row in set (0.00 sec)
```

8 How many different properties were viewed in May 2004?

Output:

```
mysql> select COUNT(propertyNo) as numberofproperty from Viewing39 where ViewDate like "2004-05-%";
+------------------+
| numberofproperty |
+------------------+
|                3 |
+------------------+
1 row in set (0.00 sec)
```

9 Find the total number of Managers and the sum of their salaries.

Output:

```
mysql> select count(position) as managercount,sum(salary) as salarysum from Staff39 where position="Manager";

+--------------+-----------+
| managercount | salarysum |
+--------------+-----------+
|            3 |     76401 |
+--------------+-----------+
1 row in set (0.03 sec)
```

10 Find the minimum, maximum and average staff salary.

Output:

```
mysql> select min(salary) as minsalary,max(salary) as maxsalary,avg(salary) as avgsalary from Staff39;
+-----------+-----------+------------+
| minsalary | maxsalary | avgsalary  |
+-----------+-----------+------------+
|      9270 |     32445 | 17883.5000 |
+-----------+-----------+------------+
1 row in set (0.00 sec)
```

11 Find total number of properties with 3 rooms.

Output:

```
mysql> select count(propertyNo) from PropertyForRent39 where rooms=3;
+--------------------+
| count(propertyNo) |
+--------------------+
|                  2 |
+--------------------+
1 row in set (0.00 sec)
```

12 Find minimum, maximum and average property rent.

Output:

```
mysql> select min(rent) as minrent,max(rent) as maxrent,avg(rent) as avgrent from PropertyForRent39;
+---------+---------+----------+
| minrent | maxrent | avgrent  |
+---------+---------+----------+
|     315 |     683 | 442.1667 |
+---------+---------+----------+
1 row in set (0.00 sec)
```

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