Group-7
DBMS ASSIGNMENT-4

ILLUSTRATE THE FOLLOWING:

1. ORDER BY CLAUSE

```
54    -- Shows employees salary in descending order and then employee id in ascending
55 •  SELECT * FROM Employee ORDER BY Salary DESC, Employee_id;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Employee_id	First Name	Last Name	DoB	Salary	Branch_id
102	Jan	Levinson	1971-12-10	250000	2
101	Michael	Scott	1970-03-15	150500	1
104	Karen	Filipelli	1980-08-19	95000	5
103	Andy	Bernard	1975-09-20	90000	4
105	Jim	Halpert	1978-10-01	90000	1
NULL	NULL	NULL	NULL	NULL	NULL

2. GROUP BY AND HAVING

THIS IS THE EMPLOYEE TABLE

```
59 •  SELECT * FROM Employee;
```

Result Grid | Filter Rows: | Edit: | Expo

Employee_id	First Name	Last Name	DoB	Salary	Branch_id
101	Michael	Scott	1970-03-15	150500	1
102	Jan	Levinson	1971-12-10	250000	2
103	Andy	Bernard	1975-09-20	90000	4
104	Karen	Filipelli	1980-08-19	95000	5
105	Jim	Halpert	1978-10-01	90000	1
106	Pam	Beesly	1979-03-15	90000	1
107	Dwight	Shrute	1974-09-12	90000	1
NULL	NULL	NULL	NULL	NULL	NULL

AFTER GROUPING:

```
60    -- groups the people in terms of their branch and salary, and in that lists those with branch_id 1
61 •  SELECT * FROM Employee GROUP BY Salary, Branch_id HAVING Branch_id=1;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Employee_id	First Name	Last Name	DoB	Salary	Branch_id
101	Michael	Scott	1970-03-15	150500	1
105	Jim	Halpert	1978-10-01	90000	1
NULL	NULL	NULL	NULL	NULL	NULL

3. AGGREGATE FUNCTIONS

COUNT

```
62    -- returns the different number of branches the employees belong to(total employees=7)
63 •  SELECT COUNT(DISTINCT Branch_id) FROM Employee;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

COUNT(DISTINCT Branch_id)
4

MAX

```
64    -- returns the maximum salary
65 •  SELECT MAX(Salary) FROM Employee;
```

Result Grid | Filter Rows: | Expo

MAX(Salary)
250000

AVG

```
66    -- returns the average salary of the office
67 •  SELECT AVG(Salary) FROM Employee;
```

Result Grid | Filter Rows: | Export: | Wrap

AVG(Salary)
122214.2857

4. LOGICAL OPERATORS ESPECIALLY WITH LIKE

```
68    -- returns employees with first names that contain the letter e or an i
69 •  SELECT Employee_id, `First Name` FROM Employee WHERE `First Name` LIKE '%e%' OR `First Name` LIKE '%i%';
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Employee_id	First Name
101	Michael
104	Karen
105	Jim
107	Dwight
NULL	NULL

5. 4 NESTED QUERIES, AT LEAST 2 HAVING MULTIPLE SUBQUERY.

```
71    -- returns employees with salary greater than the average salary
72 •  SELECT * FROM Employee WHERE Salary > (SELECT AVG(Salary) FROM Employee);
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Co

Employee_id	First Name	Last Name	DoB	Salary	Branch_id
101	Michael	Scott	1970-03-15	150500	1
102	Jan	Levinson	1971-12-10	250000	2
NULL	NULL	NULL	NULL	NULL	NULL

```
104    -- returns the projects done by employees working in branch 01
105 •  SELECT Project_id FROM Projects
106            WHERE Employee_id IN(
107                    SELECT Employee_id FROM Employee
108                            WHERE Branch_id =01);
109
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Project_id
1001
1002

WITH MULTIPLE SUBQUERIES

```
73      -- returns branches with employees whose salary is less than average
74  •   SELECT * FROM Branch
75          WHERE Branch_id IN (
76                  SELECT Branch_id FROM Employee
77                      WHERE Salary < (
78                          SELECT AVG(Salary) FROM Employee));
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap

Branch_id	Branch Name	Location
4	Stamford	Connecticut
5	Utica	New York
1	Scranton	Pennsylvania
NULL	NULL	NULL

```
79      -- returns branches with employees with age greater than average
80  •   SELECT Branch_id, `Branch Name` FROM Branch
81              WHERE Branch_id IN(
82                      SELECT Branch_id FROM Employee
83                              WHERE year(curdate())-year(DoB)  > (
84                                      SELECT AVG(year(curdate())-year(DoB)) FROM Employee));
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Branch_id	Branch Name
1	Scranton
2	Corporate
4	Stamford
NULL	NULL