VIT-AP UNIVERSITY

School Of Computer Science and Engineering

ASSIGNMENT 3

(Winter Sem 2021-2022)

Course Code: CSE2007 **Course Title:** Database Management Systems

Faculty Name: Manomita Chakraborty (70296)

Aim: To understand different operators and types of functions in SQL

Consider the following tables:

Table Name: Employee

EMP_ID	EMP_NAME	DESIGNATION	MANAGER_ID	DOJ	DEPT_ID	SALARY	GENDER
1008	Kiran	Principal	1008	1978-02-01	DEPT_1004	99000.00	M
1001	Akash	Salesman	1008	1991-07-15	DEPT_1003	35000.00	M
1002	Rishabh	Manager	1008	1992-05-23	DEPT_1001	65000.00	M
1004	Ridhi	Manager	1008	1987-11-22	DEPT_1001	85000.00	F
1003	Rihan	Analyst	1004	1991-07-15	DEPT_1001	55000.00	M
1007	Seema	Manager	1008	1991-07-15	DEPT_1001	65000.00	F
1005	Sajal	Salesman	1007	1991-07-15	DEPT_1003	35000.00	M
1006	Biki	Salesman	1002	1999-11-26	DEPT_1003	25000.00	F

Table Name: Department

DEPT_ID	DEPT_NAME	DEPT_LOCATION	Phn_Num
DEPT_1001	Human Resource	Delhi	1111
DEPT_1002	Production	Kolkata	2222
DEPT_1003	Marketing	Kerala	3333
DEPT_1004	Audit	Noida	4444
DEPT_1005	Finance	Andhra Pradesh	5555

```
CREATE TABLE EMPLOYEE_20BCE7236(
EMP_ID NUMBER(4),
EMP_NAME CHAR(9),
DESIGNATION CHAR(10),
MANAGER_ID NUMBER(4),
DOJ DATE,
DEPT_ID VARCHAR(10),
SALARY NUMBER(7),
GENDER CHAR(1)
);
CREATE TABLE DEPARTMENT_20BCE7236(
DEPT_ID VARCHAR(10),
DEPT_NAME CHAR(15),
DEPT_LOCATION CHAR(15),
Phn_Num NUMBER(6)
);

INSERT INTO EMPLOYEE_20BCE7236 VALUES(1008,'Kiran','Principal',1008,'01-FEB-1978','DEPT_1004',99000,'M');
INSERT INTO EMPLOYEE_20BCE7236 VALUES(1001,'Akash','Salesman',1008,'15-JUL-1991','DEPT_1003',35000.00,'M');
INSERT INTO EMPLOYEE_20BCE7236 VALUES(1002,'Rishabh','Manager',1008,'23-MAY-1991','DEPT_1001',65000.00,'M');
INSERT INTO EMPLOYEE_20BCE7236 VALUES(1004,'Ridhi','Manager',1008,'22-NOV-1987','DEPT_1001',85000.00,'F');
INSERT INTO EMPLOYEE_20BCE7236 VALUES(1003,'Rihan','Analyst',1004,'15-JUL-1991','DEPT_1001',55000.00,'M');
INSERT INTO EMPLOYEE_20BCE7236 VALUES(1007,'Seema','Manager',1008,'15-JUL-1991','DEPT_1001',65000.00,'F');
INSERT INTO EMPLOYEE_20BCE7236 VALUES(1005,'Sajal','Salesman',1007,'15-JUL-1991','DEPT_1003',35000.00,'M');
INSERT INTO EMPLOYEE_20BCE7236 VALUES(1006,'Biki','Salesman',1002,'26-NOV-1999','DEPT_1003',25000.00,'F')
```

```
INSERT INTO EMPLOYEE_20BCE7236 VALUES(1005,'Sajal','Salesman',1007,'15-JUL-1991','DEPT_1003',35000.00,'M');
INSERT INTO EMPLOYEE_20BCE7236 VALUES(1006,'Biki','Salesman',1002,'26-NOV-1999','DEPT_1003',25000.00,'F')
INSERT INTO DEPARTMENT_20BCE7236 VALUES('DEPT_1001','Human Resource','Delhi',1111);
INSERT INTO DEPARTMENT_20BCE7236 VALUES('DEPT_1002','Production','Kolkata',2222);
INSERT INTO DEPARTMENT_20BCE7236 VALUES('DEPT_1003','Marketing','Kerala','3333');
INSERT INTO DEPARTMENT_20BCE7236 VALUES('DEPT_1004','Audit','Noida','4444');
INSERT INTO DEPARTMENT_20BCE7236 VALUES('DEPT_1005','Finance','Andhra Pradesh','5555');

SELECT COUNT(*)FROM EMPLOYEE_20BCE7236 WHERE GENDER = 'F';
SELECT DEPT_ID, COUNT(*)AsTotal_Employee from EMPLOYEE_20BCE7236 group by DEPT_ID;
SELECT count(*) from EMPLOYEE_20BCE7236  where DESIGNATION = 'Manager';
SELECT DEPT_ID, AVG(Salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
SELECT max(salary) from EMPLOYEE_20BCE7236 group by GENDER;
SELECT * from EMPLOYEE_20BCE7236 where SALARY>35000 order by SALARY ASC;
SELECT COUNT(*) AS S_35000_SALARY_95000  FROM EMPLOYEE_20BCE7236 WHERE SALARY>=35000 AND SALARY<=95000;
SELECT min(salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
SELECT * from EMPLOYEE_20BCE7236 order by DOJ DESC;
SELECT DEPT_ID, Max(Salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
```

Questions:

1. How many female employees are there?

Select count(*) from employee where Gender = 'F';

```
SELECT COUNT(*)FROM EMPLOYEE_20BCE7236 WHERE GENDER = 'F';
SELECT DEPT_ID, COUNT(*)AsTotal_Employee from EMPLOYEE_20BCE7236 gro
SELECT count(*) from EMPLOYEE_20BCE7236  where DESIGNATION = 'Manage
SELECT DEPT_ID, AVG(Salary) from EMPLOYEE_20BCE7236 group by DEPT_ID
SELECT max(salary) from EMPLOYEE_20BCE7236 group by GENDER;
SELECT * from EMPLOYEE_20BCE7236 where SALARY>35000 order by SALARY
SELECT COUNT(*) AS S_35000_SALARY_95000  FROM EMPLOYEE_20BCE7236 WHE
SELECT min(salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
SELECT * from EMPLOYEE_20BCE7236 order by DOJ DESC;
SELECT DEPT_ID, Max(Salary) from EMPLOYEE_20BCE7236 group by DEPT_ID
```

Script Output | Query Result

SQL | All Rows Fetched: 1 in 0.003 seconds

	COUNT(*)
1	3

2. Print the Department Id and total number of employees as Total_Employee in each department.

SELECT DEPT_ID, count(*) As Total_Employee from employee group by DEPT_ID;

```
SELECT DEPT_ID, COUNT(*)AsTotal_Employee from EMPLOYEE_20BCE7236 group by DEPT_ID;
SELECT count(*) from EMPLOYEE_20BCE7236  where DESIGNATION = 'Manager';
SELECT DEPT_ID, AVG(Salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
SELECT max(salary) from EMPLOYEE_20BCE7236 group by GENDER;
SELECT * from EMPLOYEE_20BCE7236 where SALARY>35000 order by SALARY ASC;
SELECT COUNT(*) AS S_35000_SALARY_95000  FROM EMPLOYEE_20BCE7236 WHERE SALARY>=35000 AND SA
SELECT min(salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
SELECT * from EMPLOYEE_20BCE7236 order by DOJ DESC;
SELECT DEPT_ID, Max(Salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
```

Script Output | Query Result

SQL | All Rows Fetched: 3 in 0.005 seconds

	DEPT_ID	ASTOTAL_EMPLOYEE
1	DEPT_1004	1
2	DEPT_1001	4
3	DEPT_1003	3

3. How many employees work as Manager?

SELECT count(*) from employee where Designation = 'Manager';

```
SELECT count(*) from EMPLOYEE_20BCE7236  where DESIGNATION = 'Manager';
SELECT DEPT_ID, AVG(Salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
SELECT max(salary) from EMPLOYEE_20BCE7236 group by GENDER;
SELECT * from EMPLOYEE_20BCE7236 where SALARY>35000 order by SALARY ASC;
SELECT COUNT(*) AS S_35000_SALARY_95000  FROM EMPLOYEE_20BCE7236 WHERE SA
SELECT min(salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
SELECT * from EMPLOYEE_20BCE7236 order by DOJ DESC;
SELECT DEPT_ID, Max(Salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
```

Script Output | Query Result

SQL | All Rows Fetched: 1 in 0.007 seconds

	COUNT(*)
1	3

4. What is the average salary of each department? Also display the department Ids.

SELECT DEPT_ID, AVG(Salary) from employee group by DEPT_ID;

```
SELECT DEPT_ID, AVG(Salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
SELECT max(salary) from EMPLOYEE_20BCE7236 group by GENDER;
SELECT * from EMPLOYEE_20BCE7236 where SALARY>35000 order by SALARY ASC;
SELECT COUNT(*) AS S_35000_SALARY_95000  FROM EMPLOYEE_20BCE7236 WHERE SA
SELECT min(salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
SELECT * from EMPLOYEE_20BCE7236 order by DOJ DESC;
SELECT DEPT_ID, Max(Salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
```

Script Output | Query Result

SQL | All Rows Fetched: 3 in 0.005 seconds

	DEPT_ID	AVG(SALARY)
1	DEPT_1004	99000
2	DEPT_1001	67500
3	DEPT_1003	31666.666666666666666666666666666666667

5. Display details of the male and the female employees who get highest salary.
SELECT max(salary) from employee group by Gender;

```
SELECT max(salary) from EMPLOYEE_20BCE7236 group by GENDER;
SELECT * from EMPLOYEE_20BCE7236 where SALARY>35000 order by SALARY A
SELECT COUNT(*) AS S_35000_SALARY_95000  FROM EMPLOYEE_20BCE7236 WHEI
SELECT min(salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
SELECT * from EMPLOYEE_20BCE7236 order by DOJ DESC;
SELECT DEPT_ID, Max(Salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
```

Script Output | Query Result

SQL | All Rows Fetched: 2 in 0.007 seconds

	MAX(SALARY)
1	99000
2	85000

6. Display the employee details in ascending order of salary whose salary is > 35000.
SELECT * from employee where salary>35000 order by Salary ASC;

```
SELECT * from EMPLOYEE_20BCE7236 where SALARY>35000 order by SALARY ASC;
SELECT COUNT(*) AS S_35000_SALARY_95000  FROM EMPLOYEE_20BCE7236 WHERE SALARY>=35000
SELECT min(salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
SELECT * from EMPLOYEE_20BCE7236 order by DOJ DESC;
SELECT DEPT_ID, Max(Salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
```

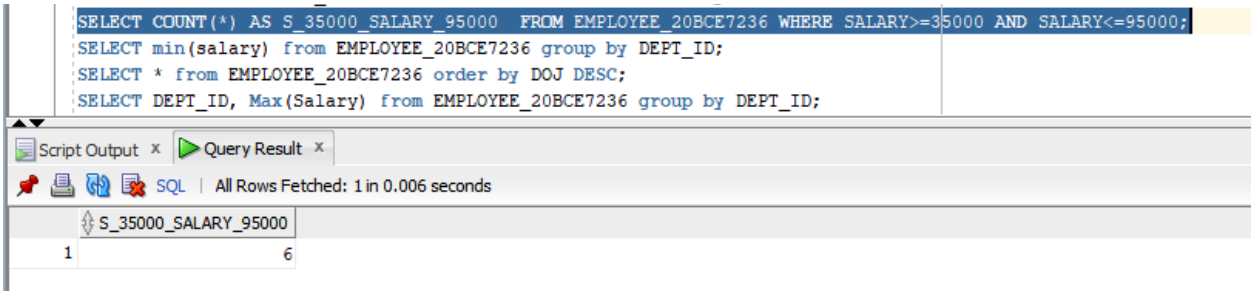
Script Output | Query Result

SQL | All Rows Fetched: 5 in 0.005 seconds

	EMP_ID	EMP_NAME	DESIGNATION	MANAGER_ID	DOJ	DEPT_ID	SALARY	GENDER
1	1003	Rihan	Analyst	1004	15-JUL-91	DEPT_1001	55000	M
2	1002	Rishabh	Manager	1008	23-MAY-91	DEPT_1001	65000	M
3	1007	Seema	Manager	1008	15-JUL-91	DEPT_1001	65000	F
4	1004	Ridhi	Manager	1008	22-NOV-87	DEPT_1001	85000	F
5	1008	Kiran	Principal	1008	01-FEB-78	DEPT_1004	99000	M

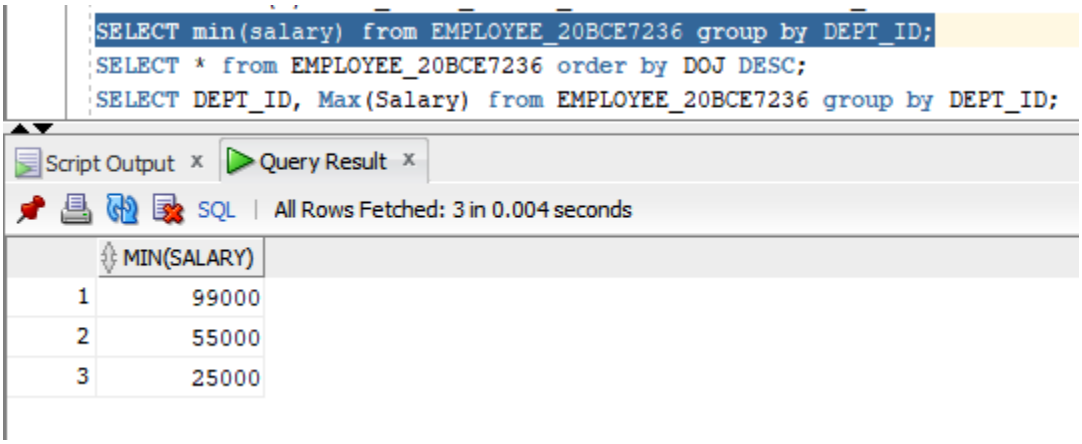
7. How many employees are paid between 35000 to 950000? Display the result with the column name as '35000<Salary<95000'.

SELECT count(*) As '35000<Salary<95000' from employee where salary>=35000 and salary<=95000;



8. Display the employee details of each department who get lowest salary.

SELECT min(salary) from employee group by DEPT_ID;



9. Display the employee details with decreasing order of their joining date

SELECT * from employee order by DOJ DESC;

```
SELECT * from EMPLOYEE_20BCE7236 order by DOJ DESC;
SELECT DEPT_ID, Max(Salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
```

Script Output | Query Result

SQL | All Rows Fetched: 8 in 0.005 seconds

	EMP_ID	EMP_NAME	DESIGNATION	MANAGER_ID	DOJ	DEPT_ID	SALARY	GENDER
1	1006	Biki	Salesman	1002	26-NOV-99	DEPT_1003	25000	F
2	1005	Sajal	Salesman	1007	15-JUL-91	DEPT_1003	35000	M
3	1001	Akash	Salesman	1008	15-JUL-91	DEPT_1003	35000	M
4	1003	Rihan	Analyst	1004	15-JUL-91	DEPT_1001	55000	M
5	1007	Seema	Manager	1008	15-JUL-91	DEPT_1001	65000	F
6	1002	Rishabh	Manager	1008	23-MAY-91	DEPT_1001	65000	M
7	1004	Ridhi	Manager	1008	22-NOV-87	DEPT_1001	85000	F
8	1008	Kiran	Principal	1008	01-FEB-78	DEPT_1004	99000	M

10. What is the Maximum salary of each department?

SELECT DEPT_ID, Max(Salary) from employee group by DEPT_ID;

```
SELECT DEPT_ID, Max(Salary) from EMPLOYEE_20BCE7236 group by DEPT_ID;
```

Script Output | Query Result

SQL | All Rows Fetched: 3 in 0.006 seconds

	DEPT_ID	MAX(SALARY)
1	DEPT_1004	99000
2	DEPT_1001	85000
3	DEPT_1003	35000

20BCE7236

S.B.ASHRITH