ExpNo:8

NESTED QUERIES , JOIN QUERIES AND SET OPERATORS

AIM: To perform nested Queries , joining Queries and set operations using DML command

QUERIES

1. Display all employee names and salary whose salary is greater than minimum salary of the company

```
select Fname,Lname,Salary
from EMPLOYEE
where Salary>(select min(Salary) from  EMPLOYEE);
```

2. Issue a query to display information about employees who earn more than any employee in dept no 5

```
select * from EMPLOYEE
where Salary>(select min(Salary) from EMPLOYEE where  Dno=5);
```

3. Display the details of those who draw the salary greater than the average salary.

```
select distinct *
from EMPLOYEE
where Salary >= (select avg(Salary) from  EMPLOYEE);
```

4. Write SQL Query which retrieves the name and address of every employee who works for the Research Department

```
select Fname, Lname, Address
from EMPLOYEE, DEPARTMENT
where Dno = Dnumber and Dname = 'Research';
```

5. Retrieve the name of each employee who has a dependent with the same first name and is the same sex as the employee.

```
Select E.Fname, E.Lname
From EMPLOYEE as E
where E.Ssn in ( Select Essn From  DEPENDENT as D where
E.Fname=D.Dependent_Name and E.Sex=D.Sex );
```

6. Make a list of all project numbers for projects that involve an employee whose last name is 'Smith', either as a worker or as a manager of the department that controls the project.

```
select Pno from WORKS_ON, EMPLOYEE
where Essn = Ssn and Lname = 'Smith'
UNION
select Pnumber from PROJECT P, DEPARTMENT D, EMPLOYEE E where
P.Dnum = D.Dnumber and D.Mgr_ssn = E.Ssn and E.Lname = 'Smith';
```

7. Write a query to display the name for all employees who work in a department with any employee whose Fname contains the letter 'h'

Select Fname from EMPLOYEE where Dno IN (Select Dno from EMPLOYEE where Fname LIKE '%h%');

8 Retrieve all employees whose address Starts with Houston.

```
select Fname, Lname, Address
from EMPLOYEE
where Address LIKE 'Houston%';
```

9. Retrieve all employees whose address is Ends with Houston..

```
select Fname, Lname, Address
from EMPLOYEE
where Address LIKE '%Houston';
```

10. Find all employees who were born during the 1960s.

```
select Fname, Lname
from EMPLOYEE
where Bdate LIKE '__6_____';
```

11. Retrieve all employees in department 5 whose salary is between $30,000 and $40,000.

 # This is the use of in between

```
SELECT *  FROM EMPLOYEE
WHERE (Salary BETWEEN 30000 AND 40000) AND Dno = 5;
```

 # this is euquqlent to <= and > =

```
SELECT *  FROM EMPLOYEE
WHERE (Salary >=  30000 AND Salary <= 40000) AND Dno = 5;
```

12. Write a SQL query to find those employees who work in the same department where 'Ramesh' works.

 # Exclude all those records where first name is 'Ramesh'. Return first name, last name.

select Fname, Lname, Dno from EMPLOYEE where dno = (select dno from EMPLOYEE where Fname = 'Ramesh') and Fname <> 'Ramesh';

13 Display all the dept numbers available in Emp and not in dept tables

Minus is no more supported in mysql

```
select Dno
from EMPLOYEE left join  DEPARTMENT on Dno = Dnumber
where Dnumber is NULL;
```

14. Display all the dept numbers available in dept and not in Emp tables

```
select Dnumber
from EMPLOYEE right join  DEPARTMENT on Dno = Dnumber
where Dno is NULL;
```

15. For every project located in 'Stafford', list the project number, the controlling department number, and the department manager's last name, address, and birth date.

```
select Pnumber, Dnum, Lname, Address, Bdate
from PROJECT, DEPARTMENT, EMPLOYEE
where Dnum=Dnumber and Mgr_ssn=Ssn and Plocation='Stafford';
```

16. For each employee, retrieve the employee's first and last name and the first and last name of his or her immediate supervisor.

```
# only employees who have a supervisor are included in the result
# this is SELF JOIN
select E.Fname, E.Lname, S.Fname, S.Lname
from  EMPLOYEE AS E, EMPLOYEE AS S
where E.Super_ssn = S.Ssn;
```

17. For each employee, retrieve the employee's first and last name and the first and last name of his or her immediate supervisor, including those who have no immediate supervisors

```
select E.Fname, E.Lname, S.Fname, S.Lname
from  EMPLOYEE AS E left join EMPLOYEE AS S on  E.Super_ssn = S.Ssn;
```

18. List the details of employees having no immediate supervisor.

```
select *
from EMPLOYEE
where Super_ssn IS NULL;
```

19. Show the resulting salaries if every employee working on the 'ProductX' project is given a 10 percent raise.

#This is use of arithmetic expression in select clause

```
select E.Fname, E.Lname, 1.1 * E.Salary AS Increased_sal
from  EMPLOYEE AS E, WORKS_ON AS W, PROJECT AS P
where E.Ssn=W.Essn AND W.Pno=P.Pnumber AND  P.Pname='ProductX';
```

20. List the first name and last name of all employees who work in the same department as the manager with last name 'Wong',

```
select E.Fname, E.Lname from EMPLOYEE E where E.Dno = ( select D.Dnumber
from DEPARTMENT D where D.Mgr_ssn = (select  E2.Ssn from EMPLOYEE E2
where E2.Lname = 'Wong'));
```

RESULT

The query was executed and output was successfully obtained.