Assignment No. 5

Problem Statement ->

Join of multiple tables; Nested queries - Sub-queries

Code ->

1. Display empno, emoname, dname and loc from emp and dept table.

```
SQL> select empno,ename,dname,loc from emp,dept where emp.deptno = dept.deptno;

     EMPNO ENAME      DNAME          LOC
---------- ---------- -------------- -------------
      7369 SMITH      RESEARCH       DALLAS
      7499 ALLEN      SALES          CHICAGO
      7521 WARD       SALES          CHICAGO
      7566 JONES      RESEARCH       DALLAS
      7654 MARTIN     SALES          CHICAGO
      7698 BLAKE      SALES          CHICAGO
      7782 CLARK      ACCOUNTING     NEW YORK
      7788 SCOTT      RESEARCH       DALLAS
      7839 KING       ACCOUNTING     NEW YORK
      7844 TURNER     SALES          CHICAGO
      7876 ADAMS      RESEARCH       DALLAS
      7900 JAMES      SALES          CHICAGO
      7902 FORD       RESEARCH       DALLAS
      7934 MILLER     ACCOUNTING     NEW YORK
```

2. Display empno, empname and their deptno, dpetname and loc from emp and dept table.

```
SQL> select empno,ename,emp.deptno,dname,loc from emp,dept
  2   where emp.deptno = dept.deptno;

     EMPNO ENAME          DEPTNO DNAME          LOC
---------- ---------- ---------- -------------- -------------
      7369 SMITH              20 RESEARCH       DALLAS
      7499 ALLEN              30 SALES          CHICAGO
      7521 WARD               30 SALES          CHICAGO
      7566 JONES              20 RESEARCH       DALLAS
      7654 MARTIN             30 SALES          CHICAGO
      7698 BLAKE              30 SALES          CHICAGO
      7782 CLARK              10 ACCOUNTING     NEW YORK
      7788 SCOTT              20 RESEARCH       DALLAS
      7839 KING               10 ACCOUNTING     NEW YORK
      7844 TURNER             30 SALES          CHICAGO
      7876 ADAMS              20 RESEARCH       DALLAS
      7900 JAMES              30 SALES          CHICAGO
      7902 FORD               20 RESEARCH       DALLAS
      7934 MILLER             10 ACCOUNTING     NEW YORK
```

3. Display the list of employees working in each department and with this display the department information even if no employee belongs to that department.

```
SQL> select dept.deptno,ename,dname,loc from emp,dept
  2  where emp.deptno(+) = dept.deptno;

    DEPTNO ENAME      DNAME          LOC
---------- ---------- -------------- -------------
        20 SMITH      RESEARCH       DALLAS
        30 ALLEN      SALES          CHICAGO
        30 WARD       SALES          CHICAGO
        20 JONES      RESEARCH       DALLAS
        30 MARTIN     SALES          CHICAGO
        30 BLAKE      SALES          CHICAGO
        10 CLARK      ACCOUNTING     NEW YORK
        20 SCOTT      RESEARCH       DALLAS
        10 KING       ACCOUNTING     NEW YORK
        30 TURNER     SALES          CHICAGO
        20 ADAMS      RESEARCH       DALLAS
        30 JAMES      SALES          CHICAGO
        20 FORD       RESEARCH       DALLAS
        10 MILLER     ACCOUNTING     NEW YORK
        40            OPERATIONS     BOSTON
```

4. List the employee name and their corresponding manager name from emp table.

```
SQL> select e.ename Emp_Name,m.ename Mgr_Name from emp e,emp m where e.mgr = m.empno;

EMP_NAME   MGR_NAME
---------- ----------
SCOTT      JONES
FORD       JONES
ALLEN      BLAKE
WARD       BLAKE
MARTIN     BLAKE
TURNER     BLAKE
JAMES      BLAKE
MILLER     CLARK
ADAMS      SCOTT
JONES      KING
BLAKE      KING
CLARK      KING
SMITH      FORD
```

5. List the employee name and their corresponding manager name from emp table along this select that employee who have no manager.

```
SQL> select e.ename Emp_Name,m.ename Mgr_Name from emp e,emp m
  2  where e.mgr = m.empno(+);

EMP_NAME   MGR_NAME
---------- ----------
SCOTT      JONES
FORD       JONES
ALLEN      BLAKE
WARD       BLAKE
MARTIN     BLAKE
TURNER     BLAKE
JAMES      BLAKE
MILLER     CLARK
ADAMS      SCOTT
JONES      KING
BLAKE      KING
CLARK      KING
SMITH      FORD
KING
```

6. List all employees who joined the company before their manager.

```
SQL> select e.ename Emp_Name,e.hiredate E_hd,m.hiredate M_hd from emp e,emp m
  2  where e.mgr = m.empno and e.hiredate < m.hiredate;

EMP_NAME   E_HD      M_HD
---------- --------- ---------
ALLEN      20-FEB-81 01-MAY-81
WARD       22-FEB-81 01-MAY-81
JONES      02-APR-81 17-NOV-81
BLAKE      01-MAY-81 17-NOV-81
CLARK      09-JUN-81 17-NOV-81
SMITH      17-DEC-80 03-DEC-81
```

7. Find names, job and salaries of all employees and also his boss.

```
SQL> select e.ename Emp_Name,e.job Emp_Job,e.sal Emp_Sal,m.ename Mgr_Name,m.job
  2  Mgr_Job,m.sal Mgr_Sal from emp e,emp m where e.mgr = m.empno;

EMP_NAME   EMP_JOB      EMP_SAL MGR_NAME   MGR_JOB      MGR_SAL
---------- --------- ---------- ---------- --------- ----------
SCOTT      ANALYST         3000 JONES      MANAGER         2975
FORD       ANALYST         3000 JONES      MANAGER         2975
ALLEN      SALESMAN        1600 BLAKE      MANAGER         2850
WARD       SALESMAN        1250 BLAKE      MANAGER         2850
MARTIN     SALESMAN        1250 BLAKE      MANAGER         2850
TURNER     SALESMAN        1500 BLAKE      MANAGER         2850
JAMES      CLERK            950 BLAKE      MANAGER         2850
MILLER     CLERK           1300 CLARK      MANAGER         2450
ADAMS      CLERK           1100 SCOTT      ANALYST         3000
JONES      MANAGER         2975 KING       PRESIDENT       5000
BLAKE      MANAGER         2850 KING       PRESIDENT       5000
CLARK      MANAGER         2450 KING       PRESIDENT       5000
SMITH      CLERK            800 FORD       ANALYST         3000
```

8. Find the names of those employees who earn more than their boss.

```
SQL> select e.ename Emp_Name,e.job Emp_Job,e.sal Emp_Sal,m.ename Mgr_Name,m.job
  2  Mgr_Job,m.sal Mgr_Sal from emp e,emp m where e.mgr = m.empno and e.sal>m.sal;

EMP_NAME   EMP_JOB      EMP_SAL MGR_NAME   MGR_JOB      MGR_SAL
---------- --------- ---------- ---------- --------- ----------
SCOTT      ANALYST         3000 JONES      MANAGER         2975
FORD       ANALYST         3000 JONES      MANAGER         2975
```

9. How much Miller needs to earn to be in BLAKE's Grade?

```
SQL> select (select min(sal) from emp where job in (select job from emp where
  2  ename like 'BLAKE')) - sal from emp where ename like 'MILLER';

(SELECTMIN(SAL)FROMEMPWHEREJOBIN(SELECTJOBFROMEMPWHEREENAMELIKE'BLAKE'))-SAL
---------------------------------------------------------------------------
                                                                       1150
```

10. List the employee name and their corresponding manager name from emp table where employee name includes an "A" and display will be appeared as in the example given below.

```
SQL> select e.ename ||' Works for ' || m.ename " Employees and their manager"
  2  from emp e,emp m where e.mgr = m.empno;

 Employees and their manager
------------------------------
SCOTT Works for JONES
FORD Works for JONES
ALLEN Works for BLAKE
WARD Works for BLAKE
MARTIN Works for BLAKE
TURNER Works for BLAKE
JAMES Works for BLAKE
MILLER Works for CLARK
ADAMS Works for SCOTT
JONES Works for KING
BLAKE Works for KING
CLARK Works for KING
SMITH Works for FORD
```

11. Display different designations present in department 20 and 30.

```
SQL> select distinct job from emp where deptno = 20 or deptno = 30 ;

JOB
---------
CLERK
SALESMAN
MANAGER
ANALYST
```

12. List the job common to department 20 and 30.

```
SQL> (select job from emp where deptno = 20) intersect
  2   (select job from emp where deptno = 30);

JOB
---------
CLERK
MANAGER
```

13. List the jobs that are unique to department 20 compare to other departments present in emp table.

```
SQL> (select job from emp where deptno = 20) minus (select job from emp where deptno != 20);

JOB
---------
ANALYST
```

14. List the employees belong to department of MILLER.

```
SQL> select ename,deptno from emp where deptno = ( select deptno from emp
  2   where ename like 'MILLER');

ENAME          DEPTNO
---------- ----------
CLARK              10
KING               10
MILLER             10
```

15. Display all employee details whose salary is greater than average salary of employees whose date of joining is before 1st April 81.

```
SQL> select * from emp where sal > ( select avg(sal) from emp
  2  where hiredate < ' 1-Apr-81');

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7499 ALLEN      SALESMAN        7698 20-FEB-81       1600        300         30
      7521 WARD       SALESMAN        7698 22-FEB-81       1250        500         30
      7566 JONES      MANAGER         7839 02-APR-81       2975                    20
      7654 MARTIN     SALESMAN        7698 28-SEP-81       1250       1400         30
      7698 BLAKE      MANAGER         7839 01-MAY-81       2850                    30
      7782 CLARK      MANAGER         7839 09-JUN-81       2450                    10
      7788 SCOTT      ANALYST         7566 19-APR-87       3000                    20
      7839 KING       PRESIDENT            17-NOV-81       5000                    10
      7844 TURNER     SALESMAN        7698 08-SEP-81       1500          0         30
      7902 FORD       ANALYST         7566 03-DEC-81       3000                    20
      7934 MILLER     CLERK           7782 23-JAN-82       1300                    10
```

17. Find the details of the employees of the department whose manager no is 7698.

```
SQL> select * from emp where deptno in (select deptno from emp where mgr = 7698);

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7499 ALLEN      SALESMAN        7698 20-FEB-81       1600        300         30
      7521 WARD       SALESMAN        7698 22-FEB-81       1250        500         30
      7654 MARTIN     SALESMAN        7698 28-SEP-81       1250       1400         30
      7698 BLAKE      MANAGER         7839 01-MAY-81       2850                    30
      7844 TURNER     SALESMAN        7698 08-SEP-81       1500          0         30
      7900 JAMES      CLERK           7698 03-DEC-81        950                    30
```

18. List the names of the employees who earn lowest salary in each department.

```
SQL> select ename,sal,deptno from emp where sal in ( select min(sal)
  2  from emp group by deptno);

ENAME             SAL     DEPTNO
---------- ---------- ----------
SMITH             800         20
JAMES             950         30
MILLER           1300         10
```

19. List the employee details whose salary greater than the average salary for their department.

```
SQL> SELECT e.empno, e.ename, e.job, e.sal
  2  FROM emp e
  3  WHERE e.sal > (
  4  SELECT AVG(e2.sal)
  5  FROM emp e2
  6  WHERE e2.deptno = e.deptno
  7  );

     EMPNO ENAME      JOB              SAL
---------- ---------- --------- ----------
      7499 ALLEN      SALESMAN        1600
      7566 JONES      MANAGER         2975
      7698 BLAKE      MANAGER         2850
      7788 SCOTT      ANALYST         3000
      7839 KING       PRESIDENT       5000
      7902 FORD       ANALYST         3000

6 rows selected.
```

20. List all employees who work in DALLAS and earn more than any employee working in CHICAGO.

```
SQL> SELECT e.empno, e.ename, e.sal, e.deptno
  2  FROM emp e
  3  WHERE e.deptno = (SELECT deptno FROM dept WHERE loc = 'DALLAS')
  4  AND e.sal > ALL (
  5  SELECT e2.sal
  6  FROM emp e2
  7  WHERE e2.deptno = (SELECT deptno FROM dept WHERE loc = 'CHICAGO')
  8  );

     EMPNO ENAME             SAL     DEPTNO
---------- ---------- ---------- ----------
      7566 JONES            2975         20
      7902 FORD             3000         20
      7788 SCOTT            3000         20
```