Fatima Jinnah Women University
Department of Software Engineering

LAB 8

Name: Raifa Khalid

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Section: A

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Course: Data Base (LAB)

EXAMPLES:

Sub Query:

```
SQL> select ename from emp
  2  where sal >
  3  (select sal from emp
  4  where ename='SCOTT'
  5  );

ENAME
----------
KING

SQL>
```

Single-Row Sub Queries:

```
SQL> select ename, job
  2  from emp
  3  where job = (select job
  4  from emp
  5  where empno=7788);

ENAME      JOB
---------- ---------
SCOTT      ANALYST
FORD       ANALYST
```

```
SQL> select ename, job, sal
  2  from emp
  3  where job= (select job
  4  from emp where empno=7934)
  5  and sal > (select sal from emp where empno=7900);

ENAME      JOB              SAL
---------- --------- ----------
ADAMS      CLERK          1100
MILLER     CLERK          1300
```

Multiple-Row Sub Queries:

```
SQL> select ename, job, sal
  2  from emp
  3  where sal = (select min(sal)
  4  from emp);

ENAME      JOB              SAL
---------- --------- ----------
SMITH      CLERK            800
```

```
SQL> select deptno, min(sal) from emp
  2  group by deptno
  3  having min(sal) >
  4  (select min(sal) from emp
  5  where deptno = 30);

    DEPTNO   MIN(SAL)
---------- ----------
        10       1300
```

```
SQL> select empno, job, sal
  2  from emp
  3  where sal < any (select sal
  4  from emp where job='CLERK')
  5  and job <> 'CLERK';

     EMPNO JOB              SAL
---------- --------- ----------
      7521 SALESMAN        1250
      7654 SALESMAN        1250
```

```
SQL> select e.ename from emp e
  2  where e.empno not in (select m.mgr
  3  from emp m);

no rows selected
```

TASKS

1. Write a query to display the employee name and hiredate of any employee in the same department as SCOTT. Exclude SCOTT.

```
SQL> select ename,hiredate from emp where deptno=(select deptno from emp where ename='SCOTT') and ename!='SCOTT';

ENAME      HIREDATE
---------- ---------
SMITH      17-DEC-80
JONES      02-APR-81
ADAMS      23-MAY-87
FORD       03-DEC-81
```

2. Create a query to display the employee number and name of all employees who earn more than average salary. Sort the results in ascending order of salary.

```
SQL> select empno,ename from emp where sal > (select avg(sal) from emp) order by sal asc;

     EMPNO ENAME
---------- ----------
      7782 CLARK
      7698 BLAKE
      7566 JONES
      7902 FORD
      7788 SCOTT
      7839 KING

6 rows selected.
```

3. Write a query that displays the employee number and name of all employees who work in a department with any employee whose name start with “S”.

```
SQL> select empno, ename from emp where ename in (select ename from emp where ename like 'S%');

     EMPNO ENAME
---------- ----------
      7369 SMITH
      7788 SCOTT
```

4. Display the employee name, department number, and job of all employees whose department location is CHICAGO.

```
SQL> select ename,deptno,job from emp where deptno = (select deptno from dept where loc='CHICAGO' );

ENAME          DEPTNO JOB
---------- ---------- ---------
ALLEN              30 SALESMAN
WARD               30 SALESMAN
MARTIN             30 SALESMAN
BLAKE              30 MANAGER
TURNER             30 SALESMAN
JAMES              30 CLERK

6 rows selected.
```

5. Display the employee name and salary of every employee who reports to King.

```
SQL> select ename, sal from emp where ename = (select ename from emp where ename='KING' );

ENAME              SAL
---------- ----------
KING             5000
```

6. Display the department number, employee name and job for every employee in the OPERATION department.

```
SQL> select d.deptno,e.job,e.ename,d.dname from emp e , dept d where d.deptno in (select deptno from dept where dname= 'OPERATIONS' );

    DEPTNO JOB       ENAME      DNAME
---------- --------- ---------- --------------
        40 CLERK     SMITH      OPERATIONS
        40 SALESMAN  ALLEN      OPERATIONS
        40 SALESMAN  WARD       OPERATIONS
        40 MANAGER   JONES      OPERATIONS
        40 SALESMAN  MARTIN     OPERATIONS
        40 MANAGER   BLAKE      OPERATIONS
        40 MANAGER   CLARK      OPERATIONS
        40 ANALYST   SCOTT      OPERATIONS
        40 PRESIDENT KING       OPERATIONS
        40 SALESMAN  TURNER     OPERATIONS
        40 CLERK     ADAMS      OPERATIONS

    DEPTNO JOB       ENAME      DNAME
---------- --------- ---------- --------------
        40 CLERK     JAMES      OPERATIONS
        40 ANALYST   FORD       OPERATIONS
        40 CLERK     MILLER     OPERATIONS

14 rows selected.
```

7. Write a query to display the employee number, employee name and salaries of all employees who earn more than average salary and who work in a department with any employee with “A” in their name.

```
SQL> select ename, empno, sal from emp where ename like '%A%' and sal > (select avg(sal) from emp);

ENAME           EMPNO        SAL
---------- ---------- ----------
BLAKE            7698       2850
CLARK            7782       2450
```