PRACTICAL 3

A) Using emp table, perform the following queries:

1) Display the details of all employees.

OUTPUT:

Run SQL Command Line

```
SQL> select * from EMP;

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- -------- ---------- ---------- ----------
      7839 KING       PRESIDENT            81-11-17       5000                    10
      7698 BLAKE      MANAGER         7839 81-05-01       2850                    30
      7782 CLARK      MANAGER         7839 81-06-09       2450                    10
      7566 JONES      MANAGER         7839 81-04-02       2975                    20
      7788 SCOTT      ANALYST         7566 87-04-19       3000                    20
      7902 FORD       ANALYST         7566 81-12-03       3000                    20
      7369 SMITH      CLERK           7902 80-12-17        800                    20
      7499 ALLEN      SALESMAN        7698 81-02-20       1600        300         30
      7521 WARD       SALESMAN        7698 81-02-22       1250        500         30
      7654 MARTIN     SALESMAN        7698 81-09-28       1250       1400         30
      7844 TURNER     SALESMAN        7698 81-09-08       1500          0         30
      7876 ADAMS      CLERK           7788 87-05-23       1100                    20
      7900 JAMES      CLERK           7698 81-12-03        950                    30
      7934 MILLER     CLERK           7782 82-01-23       1300                    10

14 rows selected.
```

2) Display the name and job for all employees.

OUTPUT:

Run SQL Command Line

```
SQL> select ENAME,JOB from EMP;

ENAME      JOB
---------- ---------
KING       PRESIDENT
BLAKE      MANAGER
CLARK      MANAGER
JONES      MANAGER
SCOTT      ANALYST
FORD       ANALYST
SMITH      CLERK
ALLEN      SALESMAN
WARD       SALESMAN
MARTIN     SALESMAN
TURNER     SALESMAN
ADAMS      CLERK
JAMES      CLERK
MILLER     CLERK

14 rows selected.
```

3) Display name and salary for all employees.

Run SQL Command Line

```
SQL> select ENAME,SAL as SALARY from EMP;

ENAME          SALARY
---------- ----------
KING             5000
BLAKE            2850
CLARK            2450
JONES            2975
SCOTT            3000
FORD             3000
SMITH             800
ALLEN            1600
WARD             1250
MARTIN           1250
TURNER           1500
ADAMS            1100
JAMES             950
MILLER           1300

14 rows selected.
```

4) Display the details of all employees who are earning salary greater than 2000.

Run SQL Command Line

```
SQL> select * from EMP
  2  where SAL>2000;

       EMP ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- -------- ---------- ---------- ----------
      7839 KING       PRESIDENT            81-11-17       5000                    10
      7698 BLAKE      MANAGER         7839 81-05-01       2850                    30
      7782 CLARK      MANAGER         7839 81-06-09       2450                    10
      7566 JONES      MANAGER         7839 81-04-02       2975                    20
      7788 SCOTT      ANALYST         7566 87-04-19       3000                    20
      7902 FORD       ANALYST         7566 81-12-03       3000                    20

6 rows selected.
```

5) Display the details of all employees who are working as Manager.

Run SQL Command Line

```
SQL> select * from EMP
  2  where JOB='MANAGER';

       EMP ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- -------- ---------- ---------- ----------
      7698 BLAKE      MANAGER         7839 81-05-01       2850                    30
      7782 CLARK      MANAGER         7839 81-06-09       2450                    10
      7566 JONES      MANAGER         7839 81-04-02       2975                    20
```

6) *Display the names of all employees who are working in department number 10.*

Run SQL Command Line

```
SQL> select ENAME as NAME from EMP
  2  where DEPTNO=10;

NAME
----------
KING
CLARK
MILLER
```

7) *Display the names of all employees working as clerk and drawing a salary more than 3000.*

Run SQL Command Line

```
SQL> select ENAME as NAME from EMP
  2  where (JOB='CLERK' and SAL>3000);

no rows selected
```

8) *Display employee number and names for employees who earn commission.*

Run SQL Command Line

```
SQL> select EMPNO,ENAME as NAME from EMP
  2  where COMM is not null;

     EMPNO NAME
---------- ----------
      7499 ALLEN
      7521 WARD
      7654 MARTIN
      7844 TURNER
```

9) *Display names of employees who do not earn any commission.*

Run SQL Command Line

```
SQL> select EMPNO,ENAME as NAME from EMP
  2  where COMM is null;

     EMPNO NAME
---------- ----------
      7839 KING
      7698 BLAKE
      7782 CLARK
      7566 JONES
      7788 SCOTT
      7902 FORD
      7369 SMITH
      7876 ADAMS
      7900 JAMES
      7934 MILLER

10 rows selected.
```

10) Display the names of employees who are working as clerk, salesman or analyst and drawing a salary more than 2000.

Run SQL Command Line

```
SQL> select ENAME as NAME from EMP
  2  where JOB in('CLERK','SALESMAN','ANALYST') and SAL>2000;

NAME
----------
SCOTT
FORD
```

11) Display the names of employees who are working as clerk, salesman or analyst.

Run SQL Command Line

```
SQL> select ENAME as NAME from EMP
  2  where JOB in('CLERK','SALESMAN','ANALYST');

NAME
----------
SCOTT
FORD
SMITH
ALLEN
WARD
MARTIN
TURNER
ADAMS
JAMES
MILLER

10 rows selected.
```

12) Display the names of employees working in department number 10 or 20 or 30.

Run SQL Command Line

```
SQL> select ENAME as NAME from EMP
  2  where DEPTNO in(10,20,30);

NAME
----------
KING
BLAKE
CLARK
JONES
SCOTT
FORD
SMITH
ALLEN
WARD
MARTIN
TURNER

NAME
----------
ADAMS
JAMES
MILLER

14 rows selected.
```

13) Display the details of employees whose salary lies in the range of 1000 and 2000.

Run SQL Command Line

```
SQL> select * from EMP
  2  where SAL between 1000 and 2000;

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- -------- ---------- ---------- ----------
      7499 ALLEN      SALESMAN         7698 81-02-20       1600        300         30
      7521 WARD       SALESMAN         7698 81-02-22       1250        500         30
      7654 MARTIN     SALESMAN         7698 81-09-28       1250       1400         30
      7844 TURNER     SALESMAN         7698 81-09-08       1500          0         30
      7876 ADAMS      CLERK            7788 87-05-23       1100                    20
      7934 MILLER     CLERK            7782 82-01-23       1300                    10

6 rows selected.
```

14) List the employees in the ascending order of their salaries.

Run SQL Command Line

```
SQL> select * from EMP
  2  order by SAL asc;

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- -------- ---------- ---------- ----------
      7369 SMITH      CLERK           7902 80-12-17        800                    20
      7900 JAMES      CLERK           7698 81-12-03        950                    30
      7876 ADAMS      CLERK           7788 87-05-23       1100                    20
      7654 MARTIN     SALESMAN        7698 81-09-28       1250       1400         30
      7521 WARD       SALESMAN        7698 81-02-22       1250        500         30
      7934 MILLER     CLERK           7782 82-01-23       1300                    10
      7844 TURNER     SALESMAN        7698 81-09-08       1500          0         30
      7499 ALLEN      SALESMAN        7698 81-02-20       1600        300         30
      7782 CLARK      MANAGER         7839 81-06-09       2450                    10
      7698 BLAKE      MANAGER         7839 81-05-01       2850                    30
      7566 JONES      MANAGER         7839 81-04-02       2975                    20
      7902 FORD       ANALYST         7566 81-12-03       3000                    20
      7788 SCOTT      ANALYST         7566 87-04-19       3000                    20
      7839 KING       PRESIDENT            81-11-17       5000                    10

14 rows selected.
```

15) List the Empno, Ename, Sal of all emps working for Mgr 7369.

Run SQL Command Line

```
SQL> select EMPNO,ENAME,SAL from EMP
  2  where MGR=7369;

no rows selected

SQL>
```

16) List the employees who are either 'CLERK' or 'ANALYST' in the Desc order.

Run SQL Command Line

```
SQL> select * from EMP
  2  where JOB in('CLERK','ANALYST')
  3  order by JOB desc;

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- -------- ---------- ---------- ----------
      7369 SMITH      CLERK           7902 80-12-17        800                    20
      7900 JAMES      CLERK           7698 81-12-03        950                    30
      7934 MILLER     CLERK           7782 82-01-23       1300                    10
      7876 ADAMS      CLERK           7788 87-05-23       1100                    20
      7902 FORD       ANALYST         7566 81-12-03       3000                    20
      7788 SCOTT      ANALYST         7566 87-04-19       3000                    20

6 rows selected.
```

17) List the employees who are working in Deptno 10 or 20.

Run SQL Command Line

```
SQL> select * from EMP
  2  where DEPTNO in(10,20);

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- -------- ---------- ---------- ----------
      7839 KING       PRESIDENT            81-11-17       5000                    10
      7782 CLARK      MANAGER         7839 81-06-09       2450                    10
      7566 JONES      MANAGER         7839 81-04-02       2975                    20
      7788 SCOTT      ANALYST         7566 87-04-19       3000                    20
      7902 FORD       ANALYST         7566 81-12-03       3000                    20
      7369 SMITH      CLERK           7902 80-12-17        800                    20
      7876 ADAMS      CLERK           7788 87-05-23       1100                    20
      7934 MILLER     CLERK           7782 82-01-23       1300                    10

8 rows selected.
```

18) List the employees whose name have a character set 'll' together.

Run SQL Command Line

```
SQL> select * from EMP
  2  where ENAME like '%LL%';

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- -------- ---------- ---------- ----------
      7499 ALLEN      SALESMAN        7698 81-02-20       1600        300         30
      7934 MILLER     CLERK           7782 82-01-23       1300                    10
```

19) List the employees in ascending order of their names.

Run SQL Command Line

```
SQL> select * from EMP
  2  order by ENAME asc;

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- -------- ---------- ---------- ----------
      7876 ADAMS      CLERK           7788 87-05-23       1100                    20
      7499 ALLEN      SALESMAN        7698 81-02-20       1600        300         30
      7698 BLAKE      MANAGER         7839 81-05-01       2850                    30
      7782 CLARK      MANAGER         7839 81-06-09       2450                    10
      7902 FORD       ANALYST         7566 81-12-03       3000                    20
      7900 JAMES      CLERK           7698 81-12-03        950                    30
      7566 JONES      MANAGER         7839 81-04-02       2975                    20
      7839 KING       PRESIDENT            81-11-17       5000                    10
      7654 MARTIN     SALESMAN        7698 81-09-28       1250       1400         30
      7934 MILLER     CLERK           7782 82-01-23       1300                    10
      7788 SCOTT      ANALYST         7566 87-04-19       3000                    20
      7369 SMITH      CLERK           7902 80-12-17        800                    20
      7844 TURNER     SALESMAN        7698 81-09-08       1500          0         30
      7521 WARD       SALESMAN        7698 81-02-22       1250        500         30

14 rows selected.
```

20) List the employees in descending order of their names.

Run SQL Command Line

```
SQL> select * from EMP
  2  order by ENAME desc;

     EMPNO ENAME      JOB              MGR HIREDATE        SAL       COMM     DEPTNO
---------- ---------- --------- ---------- -------- ---------- ---------- ----------
      7521 WARD       SALESMAN         7698 81-02-22       1250        500         30
      7844 TURNER     SALESMAN         7698 81-09-08       1500          0         30
      7369 SMITH      CLERK            7902 80-12-17        800                    20
      7788 SCOTT      ANALYST          7566 87-04-19       3000                    20
      7934 MILLER     CLERK            7782 82-01-23       1300                    10
      7654 MARTIN     SALESMAN         7698 81-09-28       1250       1400         30
      7839 KING       PRESIDENT             81-11-17       5000                    10
      7566 JONES      MANAGER          7839 81-04-02       2975                    20
      7900 JAMES      CLERK            7698 81-12-03        950                    30
      7902 FORD       ANALYST          7566 81-12-03       3000                    20
      7782 CLARK      MANAGER          7839 81-06-09       2450                    10
      7698 BLAKE      MANAGER          7839 81-05-01       2850                    30
      7499 ALLEN      SALESMAN         7698 81-02-20       1600        300         30
      7876 ADAMS      CLERK            7788 87-05-23       1100                    20

14 rows selected.
```

21) List the employees who do not belong to Deptno 20.

Run SQL Command Line

```
SQL> select * from EMP
  2  where DEPTNO <>20;

     EMPNO ENAME      JOB              MGR HIREDATE        SAL       COMM     DEPTNO
---------- ---------- --------- ---------- -------- ---------- ---------- ----------
      7839 KING       PRESIDENT             81-11-17       5000                    10
      7698 BLAKE      MANAGER          7839 81-05-01       2850                    30
      7782 CLARK      MANAGER          7839 81-06-09       2450                    10
      7499 ALLEN      SALESMAN         7698 81-02-20       1600        300         30
      7521 WARD       SALESMAN         7698 81-02-22       1250        500         30
      7654 MARTIN     SALESMAN         7698 81-09-28       1250       1400         30
      7844 TURNER     SALESMAN         7698 81-09-08       1500          0         30
      7900 JAMES      CLERK            7698 81-12-03        950                    30
      7934 MILLER     CLERK            7782 82-01-23       1300                    10

9 rows selected.
```

22) List all the employees except PRESIDENT and MANAGER.

Run SQL Command Line

```
SQL> select * from EMP
  2  where JOB <> 'PRESIDENT' and JOB <> 'MANAGER';

     EMPNO ENAME      JOB              MGR HIREDATE        SAL       COMM     DEPTNO
---------- ---------- --------- ---------- -------- ---------- ---------- ----------
      7788 SCOTT      ANALYST          7566 87-04-19       3000                    20
      7902 FORD       ANALYST          7566 81-12-03       3000                    20
      7369 SMITH      CLERK            7902 80-12-17        800                    20
      7499 ALLEN      SALESMAN         7698 81-02-20       1600        300         30
      7521 WARD       SALESMAN         7698 81-02-22       1250        500         30
      7654 MARTIN     SALESMAN         7698 81-09-28       1250       1400         30
      7844 TURNER     SALESMAN         7698 81-09-08       1500          0         30
      7876 ADAMS      CLERK            7788 87-05-23       1100                    20
      7900 JAMES      CLERK            7698 81-12-03        950                    30
      7934 MILLER     CLERK            7782 82-01-23       1300                    10

10 rows selected.
```

23) List the employees whose name starts with A.

Run SQL Command Line

```
SQL> select * from EMP
  2  where ENAME like 'A%';

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- -------- ---------- ---------- ----------
      7499 ALLEN      SALESMAN         7698 81-02-20       1600        300         30
      7876 ADAMS      CLERK            7788 87-05-23       1100                    20
```

24) List all the Clerks of Deptno 20.

Run SQL Command Line

```
SQL> select * from EMP
  2  where JOB ='CLERK' and DEPTNO =20;

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- -------- ---------- ---------- ----------
      7369 SMITH      CLERK            7902 80-12-17        800                    20
      7876 ADAMS      CLERK            7788 87-05-23       1100                    20
```

25) List the employees whose names ends with S.

Run SQL Command Line

```
SQL> select * from EMP
  2  where ENAME like '%S';

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- -------- ---------- ---------- ----------
      7566 JONES      MANAGER          7839 81-04-02       2975                    20
      7876 ADAMS      CLERK            7788 87-05-23       1100                    20
      7900 JAMES      CLERK            7698 81-12-03        950                    30
```

26) List the employees who has name of exactly 4 characters.

Run SQL Command Line

```
SQL> select * from EMP
  2  where ENAME like '____';

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- -------- ---------- ---------- ----------
      7839 KING       PRESIDENT               81-11-17       5000                    10
      7902 FORD       ANALYST          7566 81-12-03       3000                    20
      7521 WARD       SALESMAN         7698 81-02-22       1250        500         30
```

27) List the names of the employees who are working as MANAGER in department 10.

Run SQL Command Line

```
SQL> select ENAME from EMP
  2  where JOB ='MANAGER' and DEPTNO =10;

ENAME
----------
CLARK
```

28) List the total salary of employees working as ANALYST.

Run SQL Command Line

```
SQL> select sum(SAL) from EMP
  2  where JOB='ANALYST';

  SUM(SAL)
----------
      6000
```

29) List the minimum, maximum and average salary of the employees.

Run SQL Command Line

```
SQL> select min(SAL) from EMP;

  MIN(SAL)
----------
       800

SQL> select max(SAL) from EMP;

  MAX(SAL)
----------
      5000

SQL> select avg(SAL) from EMP;

  AVG(SAL)
----------
2073,21429
```

30) List the total number of employees working in department 10.

Run SQL Command Line

```
SQL> select count(DEPTNO) from EMP
  2  where DEPTNO=10;

COUNT(DEPTNO)
-------------
            3
```

B) Answer the following queries:

1) Display the total salary of employees department wise.

Run SQL Command Line

```
SQL> select DEPTNO,sum(SAL)
  2  from EMP
  3  group by DEPTNO;

    DEPTNO   SUM(SAL)
---------- ----------
        30       9400
        20      10875
        10       8750

SQL>
```

2) Display the total salary of employees job wise in ascending order of job.

Run SQL Command Line

```
SQL> select JOB,sum(SAL) from EMP
  2  group by JOB
  3  order by JOB asc;

JOB         SUM(SAL)
--------- ----------
ANALYST          6000
CLERK            4150
MANAGER          8275
PRESIDENT        5000
SALESMAN         5600

SQL>
```

3) *Display the total number of employees with specific job.*

Run SQL Command Line

```
SQL> select distinct job,count(*) from EMP
  2  group by JOB;

JOB         COUNT(*)
--------- ----------
CLERK              4
SALESMAN           4
PRESIDENT          1
MANAGER            3
ANALYST            2

SQL>
```

4) *Display the total number of employees working in each department.*

Run SQL Command Line

```
SQL> select distinct deptno,count(*) from EMP
  2  group by DEPTNO;

    DEPTNO   COUNT(*)
---------- ----------
        30          6
        20          5
        10          3

SQL>
```

5) *Display the total salary of employees specific to job and department in ascending order of job.*

Run SQL Command Line

```
SQL> select JOB,DEPTNO,sum(SAL) from EMP
  2  group by JOB,DEPTNO
  3  order by JOB;

JOB           DEPTNO   SUM(SAL)
--------- ---------- ----------
ANALYST           20       6000
CLERK             10       1300
CLERK             20       1900
CLERK             30        950
MANAGER           10       2450
MANAGER           20       2975
MANAGER           30       2850
PRESIDENT         10       5000
SALESMAN          30       5600

9 rows selected.

SQL>
```

6) *Display the total salary of the employees specific to job when employee count is greater than 1.*

Run SQL Command Line

```
SQL> select JOB,count(JOB),sum(SAL)
  2  from EMP
  3  group by JOB having count(*)>1;

JOB       COUNT(JOB)   SUM(SAL)
--------- ---------- ----------
CLERK              4       4150
SALESMAN           4       5600
MANAGER            3       8275
ANALYST            2       6000

SQL>
```

7) *Display unique jobs of employees.*

Run SQL Command Line

```
SQL> select unique JOB from EMP;

JOB
---------
CLERK
SALESMAN
PRESIDENT
MANAGER
ANALYST

SQL>
```