Aniket Prajapati
FYCS-44

DBMS
Practical - 3

1. Using emp table, perform the following queries:

- Display the details of all employees.

```
SQL> select * from EMP;

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7839 KING       PRESIDENT            17-NOV-81       5000                    10
      7698 BLAKE      MANAGER         7839 01-MAY-81       2850                    30
      7782 CLARK      MANAGER         7839 09-JUN-81       2450                    10
      7566 JONES      MANAGER         7839 02-APR-81       2975                    20
      7788 SCOTT      ANALYST         7566 19-APR-87       3000                    20
      7902 FORD       ANALYST         7566 03-DEC-81       3000                    20
      7369 SMITH      CLERK           7902 17-DEC-80        800                    20
      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
      7844 TUENER     SALESMAN        7698 08-SEP-81       1500          0         30
      7876 ADAMS      CLERK           7788 23-MAY-81       1100                    20
      7900 JAMES      CLERK           7698 03-DEC-81        950                    30
      7934 MILLER     CLERK           7782 23-JAN-82       1300                    10

14 rows selected.
```

- Display the name and job for all employees.

```
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
TUENER     SALESMAN
ADAMS      CLERK
JAMES      CLERK
MILLER     CLERK

14 rows selected.
```

- Display name and salary for all employees.

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```
SQL> select ENAME, SAL FROM EMP;

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

14 rows selected.
```

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

```
SQL> select * FROM EMP
  2  where sal>2000;

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7839 KING       PRESIDENT            17-NOV-81       5000                    10
      7698 BLAKE      MANAGER         7839 01-MAY-81       2850                    30
      7782 CLARK      MANAGER         7839 09-JUN-81       2450                    10
      7566 JONES      MANAGER         7839 02-APR-81       2975                    20
      7788 SCOTT      ANALYST         7566 19-APR-87       3000                    20
      7902 FORD       ANALYST         7566 03-DEC-81       3000                    20

6 rows selected.
```

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

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

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7698 BLAKE      MANAGER         7839 01-MAY-81       2850                    30
      7782 CLARK      MANAGER         7839 09-JUN-81       2450                    10
      7566 JONES      MANAGER         7839 02-APR-81       2975                    20
```

- Display the names of all employees who are working in department number 10.

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Run SQL Command Line

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

ENAME
----------
KING
CLARK
MILLER
```

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

```
SQL> select ENAME from EMP
  2  where JOB='CLERK' or SAL>3000;

ENAME
----------
KING
SMITH
ADAMS
JAMES
MILLER
```

- Display employee number and names for employees who earn commission.

```
SQL> select EMPNO, ENAME from EMP
  2  where COMM IS NOT NULL;

     EMPNO ENAME
---------- ----------
      7499 ALLEN
      7521 WARD
      7654 MARTIN
      7844 TUENER
```

- Display names of employees who do not earn any commission.

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```
SQL> select ENAME from EMP
  2  where COMM IS NULL;

ENAME
----------
KING
BLAKE
CLARK
JONES
SCOTT
FORD
SMITH
ADAMS
JAMES
MILLER

10 rows selected.
```

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

```
SQL> select ENAME from EMP
  2  where JOB='CLERK' OR JOB='SALESMAN' OR JOB= 'ANALYST' OR SAL>2000;

ENAME
----------
KING
BLAKE
CLARK
JONES
SCOTT
FORD
SMITH
ALLEN
WARD
MARTIN
TUENER
ADAMS
JAMES
MILLER
```

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

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```
SQL> select ENAME from EMP
  2  where JOB='CLERK' OR JOB='SALESMAN' OR JOB= 'ANALYST';

ENAME
----------
SCOTT
FORD
SMITH
ALLEN
WARD
MARTIN
TUENER
ADAMS
JAMES
MILLER

10 rows selected.
```

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

```
SQL> select ENAME from EMP
  2  where DEPTNO=10 OR DEPTNO=20 OR DEPTNO=30;

ENAME
----------
KING
BLAKE
CLARK
JONES
SCOTT
FORD
SMITH
ALLEN
WARD
MARTIN
TUENER
ADAMS
JAMES
MILLER

14 rows selected.
```

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

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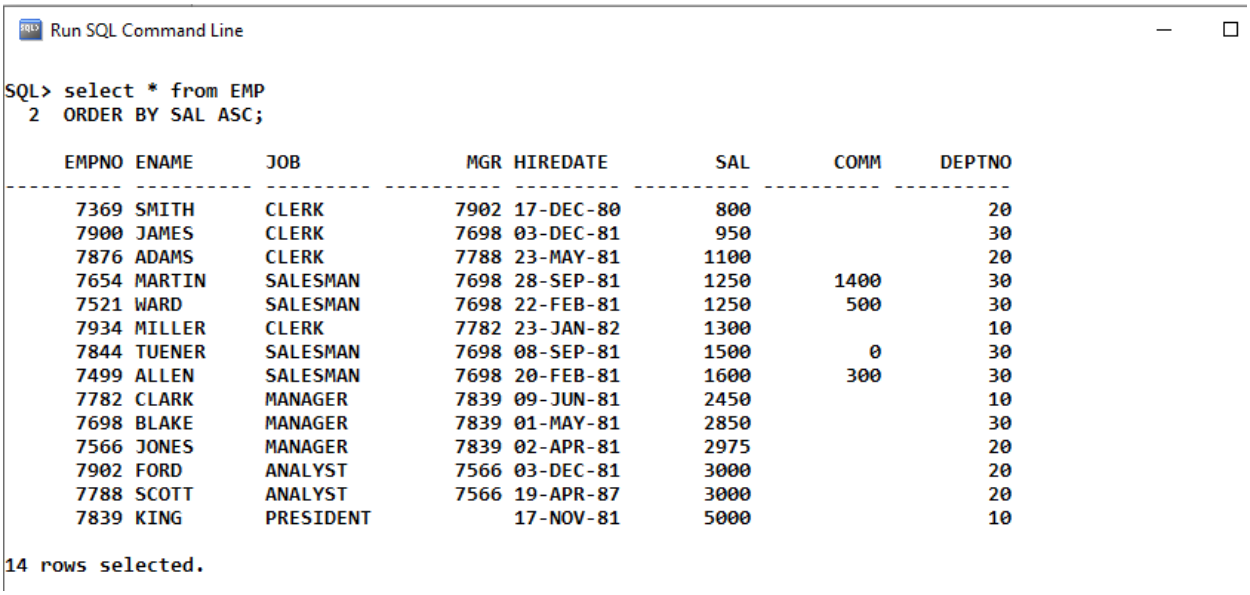
```
SQL> select * from EMP
  2  where SAL between 1000 and 2000;

     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
      7844 TUENER     SALESMAN         7698 08-SEP-81       1500          0         30
      7876 ADAMS      CLERK            7788 23-MAY-81       1100                   20
      7934 MILLER     CLERK            7782 23-JAN-82       1300                   10

6 rows selected.
```

- List the employees in the ascending order of their salaries.




```
SQL> select * from EMP
  2  ORDER BY SAL ASC;

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

14 rows selected.
```

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

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

no rows selected
```

- List the employees who are either ‘CLERK’ or ‘ANALYST’ in the Desc order.

```
SQL> select * from EMP
  2  where JOB='CLERK' OR JOB='ANALYST'
  3  ORDER BY JOB DESC;

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

6 rows selected.
```

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

```
SQL> select * from EMP
  2  where DEPTNO=10 OR DEPTNO=20;

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

8 rows selected.
```

- List the employees whose name have a character set ‘ll’ together.

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

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

- List the employees in ascending order of their names.

```
SQL> select * from EMP
  2  ORDER BY ENAME ASC;

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

14 rows selected.
```

- List the employees in descending order of their names.

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```
SQL> select * from EMP
  2  ORDER BY ENAME DESC;

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

14 rows selected.
```

- List the employees who do not belong to Deptno 20.

```
SQL> select * from EMP
  2  where DEPTNO NOT IN(20);

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7839 KING       PRESIDENT             17-NOV-81       5000                    10
      7698 BLAKE      MANAGER          7839 01-MAY-81       2850                    30
      7782 CLARK      MANAGER          7839 09-JUN-81       2450                    10
      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
      7844 TUENER     SALESMAN         7698 08-SEP-81       1500          0         30
      7900 JAMES      CLERK            7698 03-DEC-81        950                    30
      7934 MILLER     CLERK            7782 23-JAN-82       1300                    10

9 rows selected.
```

- List all the employees except PRESIDENT and MANAGER.

```
SQL> select * from EMP
  2  where JOB NOT IN ('PRESIDENT','MANAGER');

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7788 SCOTT      ANALYST          7566 19-APR-87       3000                    20
      7902 FORD       ANALYST          7566 03-DEC-81       3000                    20
      7369 SMITH      CLERK            7902 17-DEC-80        800                    20
      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
      7844 TUENER     SALESMAN         7698 08-SEP-81       1500          0         30
      7876 ADAMS      CLERK            7788 23-MAY-81       1100                    20
      7900 JAMES      CLERK            7698 03-DEC-81        950                    30
      7934 MILLER     CLERK            7782 23-JAN-82       1300                    10

10 rows selected.
```

- List the employees whose name starts with A.

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

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

- 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 17-DEC-80        800                    20
      7876 ADAMS      CLERK            7788 23-MAY-81       1100                    20
```

- List the employees whose names ends with S.

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

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

- List the employees who has name of exactly 4 characters.

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

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

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

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

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

- List the total salary of employees working as ANALYST.

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

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

- List the minimum, maximum and average salary of the employees.

```
SQL> select AVG(SAL), MAX(SAL), MIN(SAL) from EMP;

  AVG(SAL)   MAX(SAL)   MIN(SAL)
---------- ---------- ----------
2073.21429       5000        800
```

- List the total number of employees working in department 10.

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

  COUNT(*)
----------
         3
```

2. Answer the following queries:

- Display the total salary of employees department wise.

```
SQL> select DEPTNO, SUM(SAL) FROM EMP
  2  GROUP BY DEPTNO;

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

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

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```
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
```

- Display the total number of employees with specific job.

```
SQL> SELECT JOB, COUNT(*) FROM EMP
  2  GROUP BY JOB;

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

- Display the total number of employees working in each department.

```
SQL> SELECT DEPTNO, COUNT(*) FROM EMP
  2  GROUP BY DEPTNO;

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

- Display the total salary of employees specific to job and department in ascending order of job.

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```
SQL> select JOB, DEPTNO, SUM(SAL) FROM EMP
  2  GROUP BY JOB, DEPTNO
  3  ORDER BY JOB ASC;

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
```

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

```
SQL> select JOB, SUM(SAL), COUNT(*) FROM EMP
  2  GROUP BY JOB
  3  HAVING COUNT(JOB)>1;

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

- Display unique jobs of employees.

```
SQL> SELECT DISTINCT JOB FROM EMP;

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