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PRACTICAL 3
A) U sing emp table, perform the following queries:
1) Display the details of all employees.

```
SQL> select * from panthiv_EMP
  2  ;

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      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 TURNER     SALESMAN        7698 08-SEP-81       1500          0         30
      7876 ADAMS      CLERK           7788 23-MAY-87       1100                    20
      7900 JAMES      CLERK           7698 03-DEC-81        950                    30
      7934 MILLER     CLERK           7782 23-JAN-82       1300                    10

14 rows selected.

SQL>
```

2) Display the name and job for all employees.

```
SQL> select Ename,Job from panthiv_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.

```
SQL> select Ename,SAL from panthiv_EMP;

ENAME             SAL
---------- ----------
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.

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

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      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.
```

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

```
SQL> select * from panthiv_EMP
  2  where Job='MANAGER';

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      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
```

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

```
SQL> select * from panthiv_EMP
  2  where Dept_no=10;

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7839 KING       PRESIDENT            17-NOV-81       5000                    10
      7782 CLARK      MANAGER         7839 09-JUN-81       2450                    10
      7934 MILLER     CLERK           7782 23-JAN-82       1300                    10
```

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

```
SQL> select * from panthiv_EMP
  2  where Job='CLERK' and SAL>3000;

no rows selected
```

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

```
SQL> select Emp_no,Ename,comm from panthiv_EMP
  2  where comm>0;

    EMP_NO ENAME           COMM
---------- ---------- ----------
      7499 ALLEN             300
      7521 WARD              500
      7654 MARTIN           1400
```

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

```
SQL> select Emp_no,Ename,comm from panthiv_EMP
  2  where comm is null;

    EMP_NO ENAME           COMM
---------- ---------- ----------
      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.

```
SQL> select Ename from panthiv_EMP
  2  where Job in ('CLERK','SALESMAN','ANALYST')and SAL>2000;

ENAME
----------
SCOTT
FORD
```

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

```
SQL> select Ename from panthiv_EMP
  2  where Job in('CLERK','SALESMAN','ANALYST');

ENAME
----------
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.

```
SQL> select Ename from panthiv_EMP
  2  where Dept_no in(10,20,30);

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

14 rows selected.
```

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

```
SQL> select * from panthiv_EMP
  2  where SAL between 1000 and 3000;

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      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
      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 TURNER     SALESMAN        7698 08-SEP-81       1500          0         30
      7876 ADAMS      CLERK           7788 23-MAY-87       1100                    20
      7934 MILLER     CLERK           7782 23-JAN-82       1300                    10

11 rows selected.
```

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

```
SQL> select * from panthiv_EMP
  2  order by SAL ASC;

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7369 SMITH      CLERK           7902 17-DEC-80        800                    20
      7900 JAMES      CLERK           7698 03-DEC-81        950                    30
      7876 ADAMS      CLERK           7788 23-MAY-87       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 TURNER     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.
```

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

```
SQL> select Emp_no,Ename,SAL from panthiv_EMP
  2  where MGR=7369;

no rows selected
```

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

```
SQL> select * from panthiv_EMP where Job='CLERK' or Job='ANALYST'
  2  order by Job desc;

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      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-87       1100                    20
      7902 FORD       ANALYST         7566 03-DEC-81       3000                    20
      7788 SCOTT      ANALYST         7566 19-APR-87       3000                    20

6 rows selected.
```

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

```
SQL> select * from panthiv_EMP
  2  where Dept_no in(10,20);

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      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-87       1100                    20
      7934 MILLER     CLERK           7782 23-JAN-82       1300                    10

8 rows selected.
```

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

```
SQL> select * from panthiv_EMP
  2  where Ename like '%LL%';

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

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

```
SQL> select * from panthiv_EMP
  2  order by Ename ASC;

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7876 ADAMS      CLERK           7788 23-MAY-87       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 TURNER     SALESMAN        7698 08-SEP-81       1500          0         30
      7521 WARD       SALESMAN        7698 22-FEB-81       1250        500         30

14 rows selected.
```

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

```
SQL> select * from panthiv_EMP
  2  order by Ename DESC;

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7521 WARD       SALESMAN        7698 22-FEB-81       1250        500         30
      7844 TURNER     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-87       1100                    20

14 rows selected.
```

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

```
SQL> select * from panthiv_EMP
  2  where Dept_no not in 20;

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      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 TURNER     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.
```

22) List all the employees except PRESIDENT and MANAGER.

```
SQL> select * from panthiv_EMP
  2  where Job not in('PRESIDENT','MANAGER');

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      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 TURNER     SALESMAN        7698 08-SEP-81       1500          0         30
      7876 ADAMS      CLERK           7788 23-MAY-87       1100                    20
      7900 JAMES      CLERK           7698 03-DEC-81        950                    30
      7934 MILLER     CLERK           7782 23-JAN-82       1300                    10

10 rows selected.
```

23) List the employees whose name starts with A.

```
SQL> select * from panthiv_EMP
  2  where Ename like 'A%';

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7499 ALLEN      SALESMAN        7698 20-FEB-81       1600        300         30
      7876 ADAMS      CLERK           7788 23-MAY-87       1100                    20
```

24) List all the Clerks of Deptno 20.

```
SQL> select * from panthiv_EMP
  2  where Job='CLERK' and Dept_no=20;

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7369 SMITH      CLERK           7902 17-DEC-80        800                    20
      7876 ADAMS      CLERK           7788 23-MAY-87       1100                    20
```

25) List the employees whose names ends with S.

```
SQL> select * from panthiv_EMP
  2  where Ename like '%S';

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7566 JONES      MANAGER         7839 02-APR-81       2975                    20
      7876 ADAMS      CLERK           7788 23-MAY-87       1100                    20
      7900 JAMES      CLERK           7698 03-DEC-81        950                    30
```

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

```
SQL> select * from panthiv_EMP
  2  where Ename like '_____';

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7654 MARTIN     SALESMAN        7698 28-SEP-81       1250       1400         30
      7844 TURNER     SALESMAN        7698 08-SEP-81       1500          0         30
      7934 MILLER     CLERK           7782 23-JAN-82       1300                    10
```

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

```
SQL> select * from panthiv_EMP
  2  where Job='MANAGER' and Dept_no=10;

    EMP_NO ENAME      JOB              MGR HIREDATE         SAL       COMM    DEPT_NO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7782 CLARK      MANAGER         7839 09-JUN-81       2450                    10
```

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

```
SQL> select sum(SAL)
  2  from panthiv_EMP
  3  where Job='ANALYST';

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

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

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

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

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

```
SQL> select Dept_no, count(*)
  2  from panthiv_EMP
  3  group by Dept_no;

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

B) Answer the following queries:

1) Display the total salary of employees department wise.

```
SQL> select Dept_no, sum(SAL) from panthiv_EMP
  2  group by Dept_no;

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

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

```
SQL> select Job,sum(SAL)
  2  from panthiv_EMP
  3  group by Job
  4  order by Job ASC;

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

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

```
SQL> select Job,count(*)
  2  from panthiv_EMP
  3  group by Job;

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

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

```
SQL> select Dept_no,count(*)
  2  from panthiv_EMP
  3  group by Dept_no;

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

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

```
SQL> select Job,Dept_no,sum(SAL)
  2  from panthiv_EMP
  3  group by Job,Dept_no
  4  order by Job;

JOB          DEPT_NO   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.
```

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

```
SQL> select sum(SAL),count(Job) from panthiv_EMP
  2  group by Job
  3  having count(Job)>1;

  SUM(SAL) COUNT(JOB)
---------- ----------
      4150          4
      5600          4
      8275          3
      6000          2
```

7) Display unique jobs of employees.

```
SQL> select distinct Job
  2  from panthiv_EMP
  3  ;

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