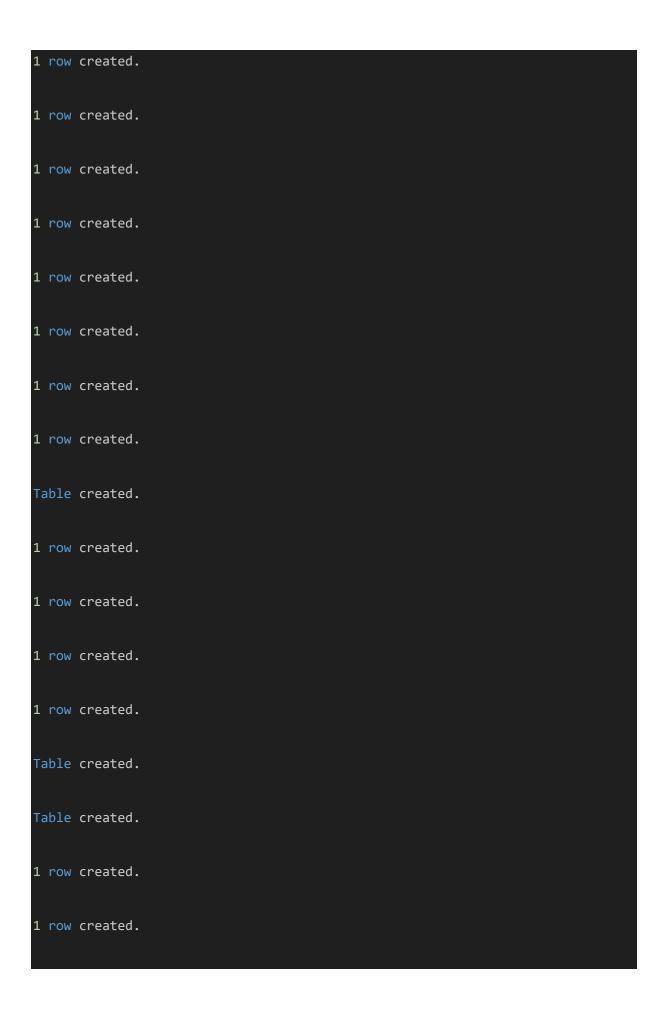# DBMS LAB
PRACTICAL-6

NAME:VEDANT BHUTADA
BATCH: A4
ROLL NO: 69

AIM: To write and execute PL-SQL programs for retrieving data using a cursor and to demonstrate various cursors. [Implicit and Explicit Cursors].

```
SQL> @"C:\Users\vedan\OneDrive\Desktop\sql\script_scott_schema.sql"
Building demonstration tables.  Please wait.

Table dropped.


Table dropped.


Table dropped.


Table dropped.


Table dropped.


Table created.


1 row created.


1 row created.


1 row created.


1 row created.


1 row created.


1 row created.
```

```
1 row created.

1 row created.

1 row created.

1 row created.

1 row created.

1 row created.

1 row created.

1 row created.

Table created.

1 row created.

1 row created.

1 row created.

1 row created.

Table created.

Table created.

1 row created.

1 row created.
```

```
1 row created.


1 row created.


1 row created.


Table created.


1 row created.


Commit complete.

Demonstration table build is complete.
SQL> set linesize 300;
SQL> set serveroutput on;
SQL> select * from emp;

     EMPNO ENAME      JOB              MGR
HIREDATE          SAL        COMM     DEPTNO




---------- ---------- --------- ---------- --------- ---------- ---------- ---
------
-


     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



     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 09-DEC-
82      3000                      20


      7839 KING        PRESIDENT            17-NOV-
81      5000                      10


      7844 TURNER      SALESMAN        7698 08-SEP-
81      1500         0          30


      7876 ADAMS       CLERK           7788 12-JAN-
83      1100                      20



     EMPNO ENAME       JOB             MGR
HIREDATE         SAL       COMM      DEPTNO


---------- ---------- --------- ---------- --------- ---------- ---------- ---
------
-
```

```
      7900 JAMES         CLERK         7698 03-DEC-
81        950                 30


      7902 FORD          ANALYST       7566 03-DEC-
81       3000                 20


      7934 MILLER        CLERK         7782 23-JAN-
82       1300                 10
```

14 rows selected.

SQL> select * from dept;

```
     DEPTNO
DNAME          LOC



---------- -------------- ------------
-



      10 ACCOUNTING      NEW
YORK



      20
RESEARCH        DALLAS



      30
SALES           CHICAGO
```

```
         40
OPERATIONS      BOSTON




SQL> DECLARE
  2      v_deptno   NUMBER;
  3      v_dname    VARCHAR2(20);
  4      v_empcount NUMBER;
  5
  6  CURSOR dept_cursor IS
  7      SELECT dept.deptno, dept.dname, COUNT(emp.empno) AS emp_count
  8      FROM dept
  9      LEFT JOIN emp ON dept.deptno = emp.deptno
 10      GROUP BY dept.deptno, dept.dname;
 11
 12
 13  BEGIN
 14      OPEN dept_cursor;
 15      LOOP
 16          FETCH dept_cursor INTO v_deptno, v_dname, v_empcount;
 17          EXIT WHEN dept_cursor%NOTFOUND;
 18          DBMS_OUTPUT.PUT_LINE('Dept: ' || v_deptno || ', Name: ' || v_dname
 || ', Employee Count: ' || v_empcount);
 19      END LOOP;
 20      CLOSE dept_cursor;
 21  END;
 22  /
Dept: 20, Name: RESEARCH, Employee Count:
5




Dept: 30, Name: SALES, Employee Count:
6




Dept: 10, Name: ACCOUNTING, Employee Count:
3




Dept: 40, Name: OPERATIONS, Employee Count:
0
```

```
PL/SQL procedure successfully completed.

SQL> --2
SQL> DECLARE
  2      v_deptno NUMBER;
  3
  4      CURSOR dept_cursor IS
  5          SELECT deptno
  6          FROM emp
  7          GROUP BY deptno
  8          HAVING COUNT(empno) >= 3;
  9
 10  BEGIN
 11      OPEN dept_cursor;
 12      LOOP
 13          FETCH dept_cursor INTO v_deptno;
 14          EXIT WHEN dept_cursor%NOTFOUND;
 15          DBMS_OUTPUT.PUT_LINE('Dept with 3 or more employees: ' ||
v_deptno);
 16      END LOOP;
 17      CLOSE dept_cursor;
 18  END;
 19  /
Dept with 3 or more employees:
20


Dept with 3 or more employees:
30


Dept with 3 or more employees:
10



PL/SQL procedure successfully completed.

SQL> --3
SQL> DECLARE
  2      v_empno NUMBER;
  3      v_ename VARCHAR2(20);
```

```
  4     v_sal    NUMBER;
  5
  6     CURSOR emp_cursor IS
  7        SELECT empno, ename, sal
  8        FROM (
  9            SELECT empno, ename, sal
 10            FROM emp
 11            ORDER BY sal ASC
 12        )
 13        WHERE ROWNUM <= 5;
 14
 15  BEGIN
 16     OPEN emp_cursor;
 17     LOOP
 18        FETCH emp_cursor INTO v_empno, v_ename, v_sal;
 19        EXIT WHEN emp_cursor%NOTFOUND;
 20        DBMS_OUTPUT.PUT_LINE('EmpNo: ' || v_empno || ', Name: ' || v_ename
|| ', Salary: ' || v_sal);
 21     END LOOP;
 22     CLOSE emp_cursor;
 23  END;
 24  /
EmpNo: 7369, Name: SMITH, Salary:
800



EmpNo: 7900, Name: JAMES, Salary:
950



EmpNo: 7876, Name: ADAMS, Salary:
1100



EmpNo: 7521, Name: WARD, Salary:
1250



EmpNo: 7654, Name: MARTIN, Salary:
1250
```

```
PL/SQL procedure successfully completed.

SQL> --4
SQL> DECLARE
  2      v_empno NUMBER;
  3      v_ename VARCHAR2(20);
  4      v_sal   NUMBER;
  5      v_deptno NUMBER;
  6
  7      CURSOR emp_cursor IS
  8          SELECT empno, ename, sal, deptno
  9          FROM emp
 10          WHERE sal > 2000;
 11
 12  BEGIN
 13      OPEN emp_cursor;
 14      LOOP
 15          FETCH emp_cursor INTO v_empno, v_ename, v_sal, v_deptno;
 16          EXIT WHEN emp_cursor%NOTFOUND;
 17          DBMS_OUTPUT.PUT_LINE('EmpNo: ' || v_empno || ', Name: ' || v_ename
|| ', Salary: ' || v_sal || ', Dept: ' || v_deptno);
 18      END LOOP;
 19      CLOSE emp_cursor;
 20  END;
 21  /
EmpNo: 7566, Name: JONES, Salary: 2975, Dept:
20



EmpNo: 7698, Name: BLAKE, Salary: 2850, Dept:
30



EmpNo: 7782, Name: CLARK, Salary: 2450, Dept:
10



EmpNo: 7788, Name: SCOTT, Salary: 3000, Dept:
20



EmpNo: 7839, Name: KING, Salary: 5000, Dept:
10
```

EmpNo: 7902, Name: FORD, Salary: 3000, Dept:
20

PL/SQL procedure successfully completed.


```
SQL> DECLARE
  2      v_empno NUMBER;
  3      v_ename VARCHAR2(20);
  4      v_sal   NUMBER;
  5      v_deptno NUMBER;
  6      v_row_count NUMBER := 0; -- Counter variable for rows fetched
  7
  8      CURSOR emp_cursor IS
  9         SELECT empno, ename, sal, deptno
 10         FROM emp
 11         WHERE sal > 2000;
 12
 13  BEGIN
 14     OPEN emp_cursor;
 15     LOOP
 16        FETCH emp_cursor INTO v_empno, v_ename, v_sal, v_deptno;
 17        EXIT WHEN emp_cursor%NOTFOUND;
 18
 19        v_row_count := v_row_count + 1; -- Increment row count
 20        DBMS_OUTPUT.PUT_LINE('EmpNo: ' || v_empno || ', Name: ' || v_ename
 || ', Salary: ' || v_sal || ', Dept: ' || v_deptno);
 21     END LOOP;
 22
 23     DBMS_OUTPUT.PUT_LINE('Rows fetched: ' || v_row_count); -- Print total
row count
 24     CLOSE emp_cursor;
 25  END;
 26  /
```
EmpNo: 7566, Name: JONES, Salary: 2975, Dept:
20

EmpNo: 7698, Name: BLAKE, Salary: 2850, Dept:
30

EmpNo: 7782, Name: CLARK, Salary: 2450, Dept:
10

EmpNo: 7788, Name: SCOTT, Salary: 3000, Dept:
20

EmpNo: 7839, Name: KING, Salary: 5000, Dept:
10

EmpNo: 7902, Name: FORD, Salary: 3000, Dept:
20

Rows fetched:
6

PL/SQL procedure successfully completed.

SQL> commit;

Commit complete.

SQL> spool off