**Program Code -**

SET SERVEROUTPUT ON

BEGIN

DBMS\_OUTPUT.PUT\_LINE('==============================');

DBMS\_OUTPUT.PUT\_LINE(' CURSOR MENU ');

DBMS\_OUTPUT.PUT\_LINE('==============================');

DBMS\_OUTPUT.PUT\_LINE('1. Implicit Cursor (1 row at a time)');

DBMS\_OUTPUT.PUT\_LINE('2. Explicit Cursor');

DBMS\_OUTPUT.PUT\_LINE('3. Cursor FOR Loop');

DBMS\_OUTPUT.PUT\_LINE('4. Parameterized Cursor');

DBMS\_OUTPUT.PUT\_LINE('==============================');

END;

/

-- Accept user choice

ACCEPT choice NUMBER PROMPT 'Enter your choice (1-4): '

-- PL/SQL block: reset O\_RollCall, insert base rows, merge

DECLARE

v\_choice NUMBER := &choice;

CURSOR c\_explicit IS

SELECT RollNo, Name, Status FROM N\_RollCall;

CURSOR c\_param(p\_roll NUMBER) IS

SELECT RollNo, Name, Status FROM N\_RollCall WHERE RollNo = p\_roll;

v\_rec N\_RollCall%ROWTYPE;

BEGIN

-- Reset O\_RollCall

EXECUTE IMMEDIATE 'TRUNCATE TABLE O\_RollCall';

-- Insert base 3 rows

INSERT INTO O\_RollCall VALUES (1, 'Rahul', 'Present');

INSERT INTO O\_RollCall VALUES (2, 'Amit', 'Absent');

INSERT INTO O\_RollCall VALUES (3, 'Suresh', 'Present');

COMMIT;

-- Merge logic based on choice

IF v\_choice = 1 THEN

-- Implicit cursor row-by-row: insert only 1 new row

BEGIN

DECLARE

v\_r N\_RollCall%ROWTYPE;

BEGIN

SELECT RollNo, Name, Status

INTO v\_r.RollNo, v\_r.Name, v\_r.Status

FROM N\_RollCall n

WHERE NOT EXISTS (SELECT 1 FROM O\_RollCall o WHERE o.RollNo = n.RollNo)

AND ROWNUM = 1;

INSERT INTO O\_RollCall VALUES (v\_r.RollNo, v\_r.Name, v\_r.Status);

EXCEPTION

WHEN NO\_DATA\_FOUND THEN NULL;

END;

END;

ELSIF v\_choice = 2 THEN

-- Explicit cursor: loop through all rows

OPEN c\_explicit;

LOOP

FETCH c\_explicit INTO v\_rec.RollNo, v\_rec.Name, v\_rec.Status;

EXIT WHEN c\_explicit%NOTFOUND;

BEGIN

INSERT INTO O\_RollCall

SELECT v\_rec.RollNo, v\_rec.Name, v\_rec.Status

FROM dual

WHERE NOT EXISTS (SELECT 1 FROM O\_RollCall o WHERE o.RollNo = v\_rec.RollNo);

EXCEPTION

WHEN DUP\_VAL\_ON\_INDEX THEN NULL;

END;

END LOOP;

CLOSE c\_explicit;

ELSIF v\_choice = 3 THEN

-- Cursor FOR loop

FOR rec IN c\_explicit LOOP

BEGIN

INSERT INTO O\_RollCall

SELECT rec.RollNo, rec.Name, rec.Status

FROM dual

WHERE NOT EXISTS (SELECT 1 FROM O\_RollCall o WHERE o.RollNo = rec.RollNo);

EXCEPTION

WHEN DUP\_VAL\_ON\_INDEX THEN NULL;

END;

END LOOP;

ELSIF v\_choice = 4 THEN

-- Parameterized cursor

FOR rec IN (SELECT RollNo FROM N\_RollCall) LOOP

OPEN c\_param(rec.RollNo);

FETCH c\_param INTO v\_rec;

IF v\_rec.RollNo IS NOT NULL THEN

BEGIN

INSERT INTO O\_RollCall

SELECT v\_rec.RollNo, v\_rec.Name, v\_rec.Status

FROM dual

WHERE NOT EXISTS (SELECT 1 FROM O\_RollCall o WHERE o.RollNo = v\_rec.RollNo);

EXCEPTION

WHEN DUP\_VAL\_ON\_INDEX THEN NULL;

END;

END IF;

CLOSE c\_param;

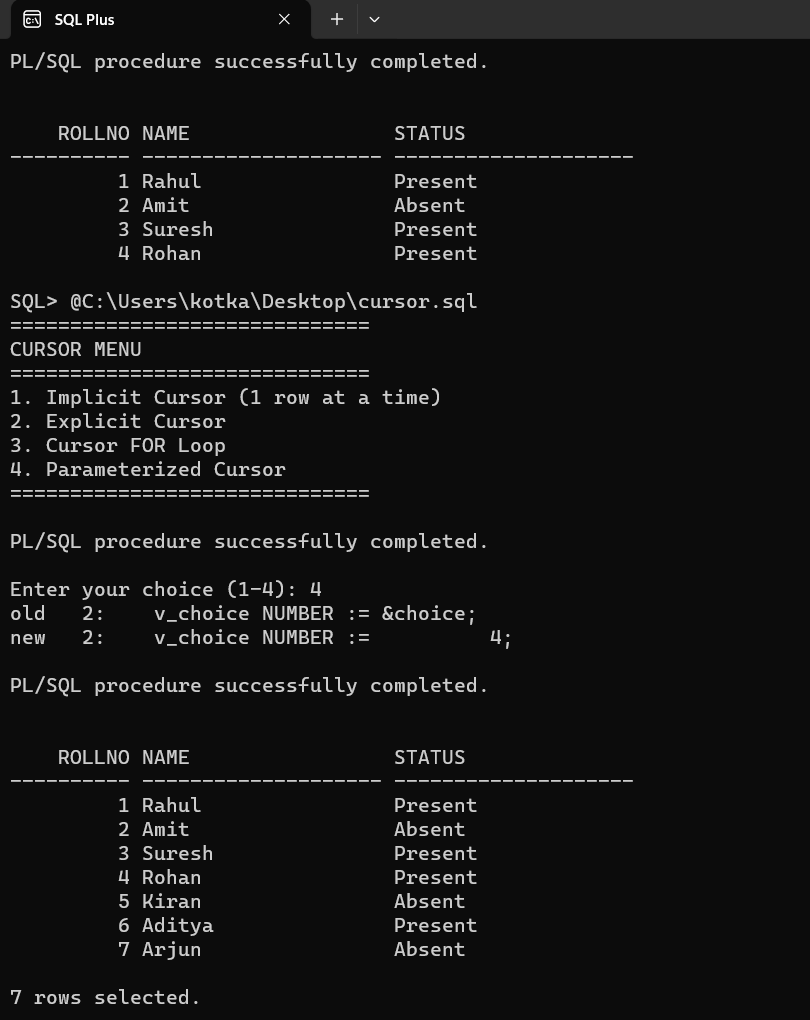
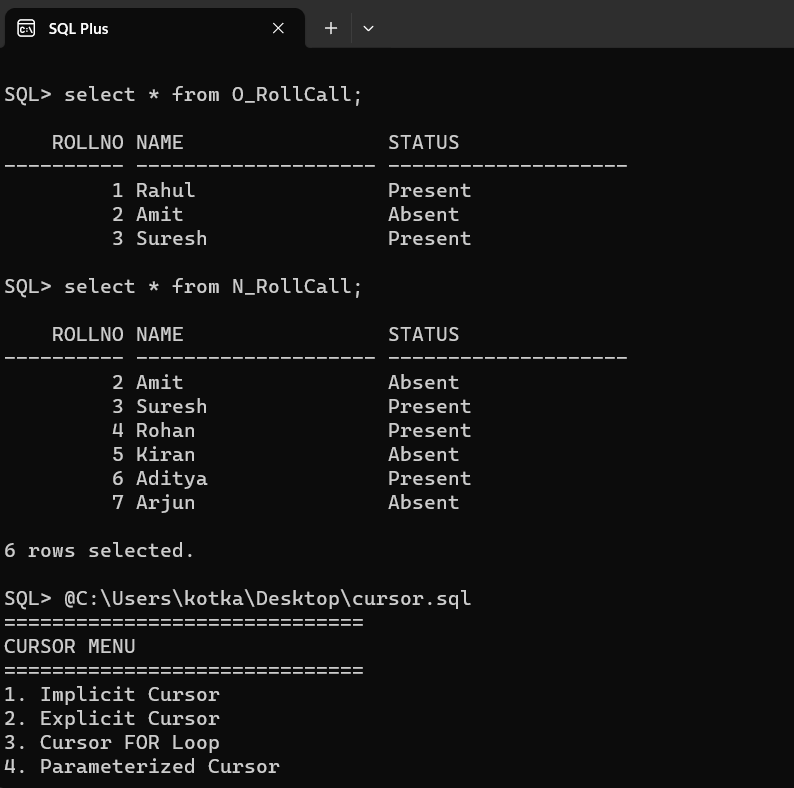
END LOOP;

END IF;

END;

/

SELECT RollNo, Name, Status FROM O\_RollCall ORDER BY RollNo;

******Output –**