EX.NO:12 03 .05.2025	PROCEDURE AND FUNCTIONS

AIM:

To perform simple Procedures and functions using PL/SQL.

PL/SQL:Procedural Language/Structural Query Language.

PL/SQL is,

>   To add programming logic to SQL

>   To create triggers

A PL/SQL procedure can be,

>   Named block

>   Unnamed block

The part in a block are,

>   Declaration part

>   Execution part

>   Execution part(optional)

CREATE TABLE:

SQL> CREATE TABLE cirf (

>   r NUMBER(5,0),

>   cirf NUMBER(7,5)

>);

Table created.

A SIMPLE PL/SQL PROCEDURE:

SQL> DECLARE

>   pi CONSTANT NUMBER := 3.14;

>   r INTEGER := 5;

>   cirf NUMBER(7,3);

> BEGIN

```
      cirf := 2 * pi * r;
    INSERT INTO cirf values(r, cirf)


  END;
  /
PL/SQL procedure successfully completed.
SQL> select * from cirf;
```

R	CIRF
5	31.400

PL/SQL PROCEDURE WITH FOR LOOP:

```
 SQL> DECLARE
    pi CONSTANT NUMBER := 3.14;
    cirf_value NUMBER(7,3);
  BEGIN
   FOR r IN 1..7 LOOP
     cirf_value := 2 * pi * r;
      INSERT INTO cirf values (r, cirf)
   END LOOP;
  END;
  /
PL/SQL procedure successfully completed.
SQL> select * from cirf;
```

R	CIRF
1	6.280
2	12.560
3	18.840
4	25.120
5	31.40
6	37.680
7	43.960

PL/SQL PROCEDURE WITH WHILE LOOP:

```
SQL> DECLARE
    pi CONSTANT NUMBER := 3.14;

    r INTEGER := 1;  -- Start r at 1
    cirf NUMBER(7,3);
 BEGIN
   WHILE r <= 7 LOOP
     cirf := 2 * pi * r;

     INSERT INTO cirf (r, cirf)
      VALUES (r, cirf);
    r := r + 1;
   END LOOP;

 END;
 /
PL/SQL procedure successfully completed.

SQL> select * from cirf;
```

R	CIRF
1	6.280
2	12.560
3	18.840
4	25.120
5	31.40
6	37.680
7	43.960

7 rows selected.

PL/SQL PROCEDURE WITH EXCEPTION:

```
SQL> DECLARE
    pi CONSTANT NUMBER := 3.14;
    r INTEGER(5);
    cirf NUMBER(7,5);
    temp NUMBER(7,5);
BEGIN
    r := 5;
    WHILE r <= 8 LOOP
        temp := 1 / (r - 4);
        cirf := 2 * pi * r;
        INSERT INTO cirf VALUES (r, cirf);
        r := r + 1;
    END LOOP;
EXCEPTION
    WHEN ZERO_DIVIDE THEN
        INSERT INTO cirf VALUES (0, 0);
END;
/
PL/SQL procedure successfully completed.
SQL> select * from cirf;
    R           CIRF
---------------  --------------------------
    5           31.40000
    6           37.68000
    7           43.96000
    8           50.24000
```

CONTENTS	MARKS ALLOTED	MARKS OBTAINED
Aim,algorithm,SQL,PL/SQL	30	
Execution and Result	20	
Viva	10	
Total	60	

RESULT:

   Thus, the simple procedures and functions using PL/SQL were executed successfully with various approaches