DATE 22/9/25

TASK : 7 PROCEDURE FUNCTION AND LOOP :

USING PL / SQL PROCEDURE , FUNCTIONS & LOOPS

AIM: To Implement PL/SQL produres, functions and loops on number Theory and business Scenarious.

1, Simple PL/SQL program (static input)

```
DECLARE
    message VARCHAR2(20) := 'Booking closed';
BEGIN
    dbms_output.put_line(message);
END;
```

OUTPUT:

Booking closed

2. conditional statement (Dynamic input):

```
DECLARE
    hid NUMBER(3) := 100;
BEGIN
    If (hid = 10) THEN
    dbms_output.put_line ('value of hid is 10');
    ELSIF (hid = 20) THEN
    dbms_output.put_line('value of hid is 20');
```

```
ELSIF(hid = 30) THEN
    dbms_output.put_line ('value of hid is 30');
ELSE
    dbms.output.put_line ('None of the value's
                           matching');
ENDIF;
    dbms - output.put line('Exact value
     of hid is [hid]');
END;
```

OUTPUT: None of the value is matching
Exact value of hid in :100

3. Nested loops example:

```
DECLARE
    hid  Number(1);
    oid  Number(1);

BEGIN
    << outer_loop >>
  for  hid  IN 1 .. 3 loop
      << inner_loops >>
    for oid IN 1 .. 3 loop
    dbms_output.put_line ('hid is :' || hid || and
                          oid is :' || oid);
    END loop inner loop;
END  loop  outer_loop;
```

END

OUTPUT:

hid is: 1 and oid is: 1
hid is: 1 and oid is: 2.
hid is: 2 and oid is: 3
hid is: 2 and oid is: 1
hid is: 2 and oid is: 2
hid is: 3 and oid is: 1
hid is 3 and oid is: 2
hid is 3 and oid is: 3

4. Prodcedure Example:-

```
CREATE OR REPLACE PROCEDURE
booking_status (E_id IN NUMBER)
IS
BEGIN
If C_id >200 THEN
        dbms_output.put_line('No booking
                              available');
ELSE
        dbms_output.put_line ("Booking
                              open');
END If;
END;
```

Execution:-

```
Begin
    booking_status(150);
    booking_status(250);
END;
```

OUTPUT:

Booking open
No Booking available

PL/SQL PROCEDURE FOR LOOPS

Example: using WHILE LOOP with
cursor prime check using while
LOOP

```
CREATE OR REPLACE PROCEDERE Print_prime
CURSOR cost_cor IS                    (customer_ID
    SELECT customer_id FROM customer
    v_id number;
    v_is_prime Boolean;
    v_i Number;
BEGIN
    open cust_cor;
LOOP
    FETCH cust_cor INTO v_id;
EXIT THEN CUST_CUR%.NOTFOUND;
If v_id<2 THEN
    v_is_prime:=FALSE:
ELSE
    v_is_prime := TRUE;
    v_i:=2:
WHILE v_i<= TRUNC(SQRT(v_id))loop
    If MOD(v_id,v_i)=0 THEN
        v_is_prime := FALSE:
        EXIT:
    END IF;
    v_i:=v_i+1;
END LOOP;
ENDIf:
If v_is_prime THEN
    dbms_output.put_line('prime
                customer ID:
                v_id);

END if;
END LOOP.
CLOSE cost_cus;
END
```

The procedure checking all customer in the table and prints. The prime ones using a WHILE LOOP

Example 2: Using for loop for first N prime Numbers

```
CREATE OR REPLACE PROCEDURE print_
 First_n_primer (n number) IS.
    v_num    Number:=2;
    v_count  Number:=0;
    v_is_prime BOOLEAN;
BEGIN
    While v_count < nloop
    v_is_prime:=True;
  FOR  i IN 2 TRUNC (SORT(v_num)) LOOP
    If MOD(v_num)=0 THEN
       v_is_prime:=FALSE;
       Exit;
    END If;
   END LOOP;
    If v_is_prime THEN
       dbms_output_put_line (prime:"||v_num);
       v_count = v_count+1;
       END If;
       v_num:=v_num+1;
       END LOOP;
       END
```

This procedure prints the first N prime numbers using a for loop.

```
BEGIN
   print_First_n_prime(10);
END;
```

VEL TECH	
EX No.	9
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	
TOTAL (20)	20
SIGNATURE WITH DATE	22/9

Result: Thus, the procedure function and loops program using PL/SQL procedors, functions & loops are executed successfully.