TASK 7:-

Date: 23/09/25

PL/SQL procedure, function, Loops.

Aim: To implement PL/SQL procedure, Functions and Loops on number theory and business Scenarios.

Declaration:

Starts with the keyword DECLARE. It is an optional section and defines all variables, whereas, subprograms and other elements to be used in the program.

Executable Commands:

Enclosed between the keywords BEGIN and END and it is a mandatory section.

Exception Handling:

Starts with the keyword EXCEPTION. This is optional size Section contains exception that handle errors in the program.

Syntax:

```
DECLARE
    < declarations section >
BEGIN
    < executable Command(s) >
EXCEPTION
    < exception handling >
END;
```

Query:

```
DECLARE
message varchar2(20) := " admission open";
BEGIN
    dbms_output.put_line(message);
END;
```

O/P

admission is open.

Query:

```
Set serveroutput on;

declare
    x number(5);
    y number(5);
    z number(9);
begin
    x := 10;
    y := 12;
    z := x * y;
dbms_output.put_line("multiplication of two num is :"||z);
    end;
/
```

O/P

multiplication of two num is 120.

Query:

```
declare
var1 integer;
var2 integer;
var3 integer;
begin
var1 := &var1;
var2 := &var2;
var3 := var1 + var2;
dbms_output.put_line <var3>;
    end;
/
```

Input

Enter value for var 1 : 60

old 6 : var 1 : = &var 1;

new 6 : var 1 : = 20;

Enta value for var 2 : 30

old 7 : var 2 : & var 2 :

new 7 : var 2 : = 30;

90.

Query :

```
Declare
   hid number(5) : = 100;
BEGIN
   If (hid = 10) then
dbms_output.put_line ("value of hid is 10");
   Elif (hid = 20) then
dbms_output.put_line ("value of hid is 30");
Else
dbms_output.put line ("None of the values is matching");
End if;
dbms_Output.put_line ("Exact value of hid is :" || hid);
   END;
/
```

O/P

None of the value is matching

Exact value of hid is : 100.

Loop

```
Declare
    hid number(1);
    oid number(1);
Begin
    << outer_loop >>
For hid IN 1.....3 Loop
    << inner_loop >>
=>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 : 1  and  oid is : 3
Hid is : 2  and  oid is : 1
Hid is : 2  and  Oid is : 2
Hid is : 2  and  Oid is : 3
Hid is : 3 and  Oid is : 1
Hid is : 3  and  oid is : 2
Hid is : 3  and  Oid is : 3
```

while loop:

```
Set  Serveroutput on:
Create or  replace procedure print_first_n_primes (n number) is
    v_num Number := 20;
    v_ number := 0;
    v_ is_prime Boolean;
```

```
Begin
  while v_count < n loop
    v_is_prime := True;
-- prime check using for loop
For i in 2 .. Trun (Sqrt (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;
/
```

O/P

```
Exec print_first_n_primes (10);
```

2
3
5
7
11
13
17
19
23
27

while loop

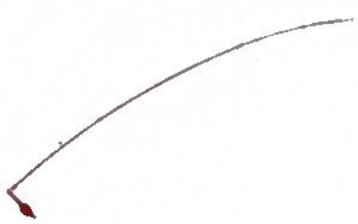
```
Create or Replace procedure print_prime customer_16
  cursor cust_cur is
  Select SID from student;
  v_id Number;
v_is_prime Boolean;
  v_i Number;

Begin
  open cust_cur;
  Loop
  Fetch cust_cur into v_id;
  Exit when cust_cur%NOT FOUND;
-- prime check using while loop
  If v_id < 2 then
     v_is_prime := false;
Else
    v_is_prime := True;
    v_i := 2;
while v_i < True (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;
End if;
  If v_is_prime then
dbms_output.put_line ('prime student ID:' || v_id);

  End if;
  End loop;
  close cust_cur;
   End;
/
```

Output:

prime student ID : 2

prime student ID : 3

prime student ID : 5



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EX NO.	9
PERFORMANCE (5)	6
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	
TOTAL (20)	
SIGN WITH DATE	

29/9/21

Result:

Implimentation of PL/SQL procedures, functions and loop on number theory. has been successfully executed.