Task 6: PL/SQL Procedures, functions, loops

Aim:

To implement PL/SQL Procedures, functions & loops on Number theory and business scenarios.

Procedure:

PL/SQL is a combination of SQL along with the procedual features of programing languages. PL/SQL is one of three keys programming language embedded in the Oracle Database, along with SQL itself & java.

| S-No | Sections & Description. |
|---|---|
| 1 | Declarations<br>This Section starts with keyword DECLARE. It is an optionall section. all variables, cursors, subprograms & other elements to be used in the program |
| 2. | This Sections is enclosed btw the keyword BEGIN & End it is mandatory Section. which may be just a Null comm to indicate that nothing should be executed. |
| 3. | Exceptions Handling.<br>This section starts with the keyword Exception. This optional section contain exception that errors in the program. |

Simple program to print a Sentence:

Syntax:

< declaration section >

BEGIN

< executable command(s) >

Exception.

< exception handling >

END;

Program:

```
DECLARE
    message varchar2(20) := 'booking closed';
BEGIN
    dbms_output.put_line(message);
END;
/
```

Static input:

```
SQL> set serveroutput on.
SQL> declare.
2  x number(5);
3  y number(5);
4  z number(9);
5  begin.
6  x := 10;
7  y := 12;
8  z := x+y;
9  dbms_output.put_line('sum is :: z);
10 end;
11 /
```

sum is 22

PL/SQL procedure successfully completed.

Dynamic input:

```
SQL> declare
  2  var1 integer;
  3  var2 integer;
  4  var3 integer;
  5  begin
  6  var1 := &var1;
  7  var2 := &var2;
  8  var3 := var1 + var2;
  9  dbms_output.put_line(var3);
 10  end;
 11  /
Enter value for var1: 20
old   6: var1 := &var1;
new   6: var1 := 20;
Enter value for var2: 30
old   7: var2 := &var2;
new   7: var2 := 30;

PL/SQL procedure successfully completed.
```

DECLARE

```
    hid number(3) := 100;
BEGIN
    If (hid = 10) Then
        dbms_output.put_line('value of
GELSIF (hid = 20) hid is 10');
Then
        dbms_output.put_line('value
of hid is 20');
```

```
Elsif (hid=30) Then.
 dbms_output_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;
/
```

None of the values is matching
exact value of hid is: 100

PL/SQL procedure successfully completed.

```
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
  ||' & oid is: '||oid);
   END loop inner_loop;
END END loop outer_loop;
END;
/
```

hid is: 1 and oid is: 1

hid is: 1 and oid is: 2

hid is: 1 andoid is: 3

hid is: 2 and oid is: 1

hid is: 2 and oid is: 2

hid is: 2 andoid is 3

hid is: 3 and oid is: 1

hid is 3 & oid is: 2

hid is 3 & oid is: 3

PL/SQL procedure successfully completed.

Sample program for only procedure:

SQL> create or replace procedure is in formation

2 (c_id in number, c_name in varchar 2)

3 is

4 begin.

5. dbms_output.put_line('ID:: c_id);

6. dbms_output.put_line('Name:: c_name);

7. end;

8 /

Procedure created.

SQL> exec is information (101, 'raam');

PL/SQL procedure successfully completed

SQL > Set Serveroutput on;
SQL > exec cs information (101, 'ram');

ID : 101
Name : raam.

PL/SQL procedure successfully completed.

<u>Sample program for only function:</u>

SQL> Create or replace function cs information
(h_id in number, c_name in varchar2)
Return varchar2
is
Begin
If c_id > 200 then
Return ('no booking available');
Else
Return ('booking open');
End if;
End; function created 4/9/25

SQL > declare
2 msy varchar2 (200);
3 Begin
4 msy := cs information (101, 'raam');
5 dbms_output.put_line (msy);
6 end;
7 /

SQL > declare
2 msy varchar2 (200);
3 Begin
4 msy := cs information (206, 'raam');
5 dbms_output.put_line (msy);
6 end;
7 /

<u>Result</u> : Thus the program has been implemented successfully

, functions, loops

Task 6: PL/SQL procedure, functions, loop

```
SQL*Plus: Release 11.2.0.2.0 Production on Thu Sep 25 14:41:38 2025

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SQL> connect
Enter user-name: system
Enter password:
ERROR:
ORA-01017: invalid username/password; logon denied


SQL> connect
Enter user-name: system
Enter password:
Connected.
SQL> set serveroutput on
SQL> declare
  2  x number(5);
  3  y number(5);
  4  z number(9);
  5  begin
  6  x:=10;
  7  y:=12;
  8  z:=x+y;
  9  dbms_output.put_line('sum is'|| z);
 10  end;
 11  /
sum is22

PL/SQL procedure successfully completed.

SQL> declare
  2  var1 integer;
  3  var2 integer;
  4  var3 integer;
  5  begin
  6  var1:=&var1;
  7  var2:=&var2;
  8  var3:=var1+var2;
  9  dbms_output.put_line(var3);
 10  end;
 11  /
```

...4. functions, loops

```
Enter value for var1: 20
old   6: var1:=&var1;
new   6: var1:=20;
Enter value for var2: 30
old   7: var2:=&var2;
new   7: var2:=30;
50

PL/SQL procedure successfully completed.

SQL> create or replace procedure csinformation
  2 (c_id in number,c_name in varchar2)
  3 is
  4 begin
  5 dbms_output.put_line('ID:' || c_id);
  6 dbms_output.put_line('name:' || c_name);
  7 end;
  8 /

Procedure created.

SQL> exec csinformation(101,'raam');
ID:101
name:raam

PL/SQL procedure successfully completed.

SQL> set serveroutput on;
SQL> exec csinformation(101,'raam');
ID:101
name:raam

PL/SQL procedure successfully completed.
```

| VEL TECH | |
|---|---|
| EX NO. | 6 |
| PERFORMANCE (5) | 5 |
| RESULT AND ANALYSIS (5) | 4 |
| VIVA VOCE (5) | 4 |
| RECORD (5) | 4 |
| TOTAL (20) | 18 |
| SIGN WITH DATE | |

Result:- Thus, the PL/SQL procedures, functions loops has been executed successfully