30/3/23

Exp — 9 PL/SQL Conditional And Iterative Statements

Aim: To manipulate Conditional & Iterative statements in PL/SQL.

PL/SQL is a combination of SQL along with procedural features of programming languages.
Its grouped into structures called blocks.
Consists of 3 sections: declation section, executable section and exception section.

```
declare
        <declaration section>

begin
        <executable commands>

exception
        < exception handling>

end;
```

Creating and Executing PL/SQL Programs

Edit PL/SQL in text file and save with .sql extension. In oracle execute →

```
SQL> set server output on;
// execute program using following comd.
SQL> start filename, or
SQL> @filename
```

01) Run the following query

```
Declare
    a number;
    b number;
    c number;
Begin
    dbms_output.put_line('Enter a: ');
    a:=&a;
    dbms_output.put_line('Enter b: ');
    b:=&b;
    dbms_output.put_line('Enter c: ');
    c:=&c;
    dbms_output.putline('NUMBERS');
    IF a>b AND a>c THEN
        dbms_output.put_line('A is MAXIMUM');

    ELSIF (b>a) AND (b>c) THEN
        dbms_output.put_line('B is MAXIMUM');

    ELSE
        dbms_output.put_line('C is Maximum');

    END IF;

END;
/
```

```
SQL> @C:\Users\Administrator\Desktop\exp9;
Enter value for a : 52
old   7: a:= &a;
new   7: a:= 52;
Enter value for b : 23
old 9: b:= &b;
new 9: b:= 23;
Enter value for c : 42
old  11: c:= &c;
new  11: c:=42;
Enter a:
Enter b:
Enter c:
NUMBERS
A is Maximum

PL/SQL procedure successfully completed.
```

Q2) Write a Program to swap two numbers

```
Declare
a number;
b number;
temp number;
Begin
dbms_output.put_line ('enter a: ');
a:= &a;
dbms_output.put_line('enter b: ');
b:= &b;
dbms_output.put_line ('Before Swap');
dbms_output.put_line ('A = '||a);
dbms_output.put_line ('B = '||b);
temp := a;
a := b;
b := temp;
dbms_out.put_line ('After Swap');
dbms_output.put_line('A = '||a);
dbms_output.put_line('B = '||b);
End;
/
```

Enter a : 21

old 7: a := &a

new 7: a := 21;

Enter b : 35

old 9: b := &b

new 9: b := 35

Enter a:

Enter b:

Before Swap

A = 21

B = 35

After Swap

A = 35

B = 21

5/A

Q3) Write a PL/SQL program to write factorial of given number.

```
Declare
 n Number;
 fact Number := 1;
Begin
  n:=&n;
 For i IN 1..n LOOP
   fact := fact * i;
 END LOOP;
 DBMS_Output.put_line ('factorial of '||n||' = '||
                                          fact);
END;
/
```

Output:

enter n: 5

~~5! = 120~~

old 7: n := &n

new 7: n := 5

~~5! = 120~~

factorial of 5 = 120