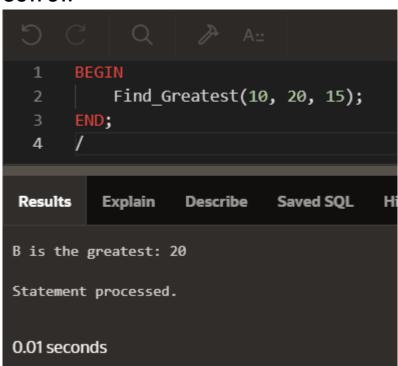
Experiment 14: To understand the concepts of function and procedure in PL/SQL.

<u>Objective:</u> Students will be able to implement the PI/SQL programs using function and procedure.

- Implement the above experiments of PL/SQL using functions and procedures.
 - 1. Write a PL/SQL code to accept the value of A, B & C display which is greater.

INPUT:



2. Using PL/SQL Statements create a simple loop that display message "Welcome to PL/SQL Programming" 20 times.

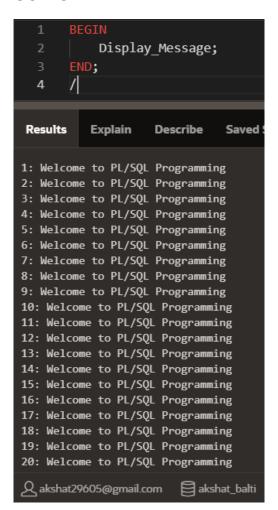
INPUT:

```
1 CREATE OR REPLACE PROCEDURE Display_Message IS
2 BEGIN
3 FOR i IN 1..20 LOOP
4 DBMS_OUTPUT.PUT_LINE(i || ': Welcome to PL/SQL Programming');
5 END LOOP;
6 END;
7 /|

Results Explain Describe Saved SQL History

Procedure created.

0.03 seconds
```



3. Write a PL/SQL code block to find the factorial of a number.

INPUT:

Using Function:

```
CREATE OR REPLACE FUNCTION Factorial(N IN NUMBER) RETURN NUMBER IS

F NUMBER := 1;

BEGIN

FOR i IN 1..N LOOP

F := F * i;

END LOOP;

RETURN F;

END;

//

Results Explain Describe Saved SQL History

Function created.

0.03 seconds
```

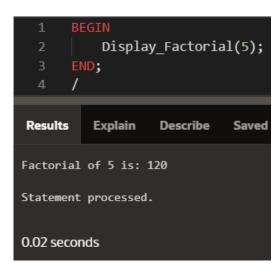
Using Procedure:

```
1 CREATE OR REPLACE PROCEDURE Display_Factorial(N IN NUMBER) IS
2 BEGIN
3 DBMS_OUTPUT.PUT_LINE('Factorial of ' || N || ' is: ' || Factorial(N));
4 END;
5 /

Results Explain Describe Saved SQL History

Procedure created.

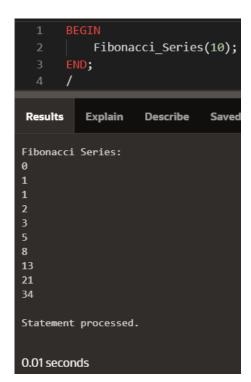
0.02 seconds
```



4. Write a PL/SQL program to generate Fibonacci series.

INPUT:

```
CREATE OR REPLACE PROCEDURE Fibonacci_Series(N IN NUMBER) IS
          a NUMBER := 0;
          b NUMBER := 1;
          c NUMBER;
          DBMS_OUTPUT.PUT_LINE('Fibonacci Series: ');
          FOR i IN 1..N LOOP
              DBMS_OUTPUT.PUT_LINE(a);
             c := a + b;
              a := b;
          END LOOP;
      END;
      /
14
         Explain
Results
                  Describe
                          Saved SQL
                                       History
Procedure created.
0.04 seconds
```



5. Write a PL/SQL code to fund the sum of first N numbers

INPUT:

Using Function:

```
1 CREATE OR REPLACE FUNCTION Sum_N(N IN NUMBER) RETURN NUMBER IS
2 SUM_RESULT NUMBER := 0;
3 BEGIN
4 FOR i IN 1..N LOOP
5 SUM_RESULT := SUM_RESULT + i;
6 END LOOP;
7 RETURN SUM_RESULT;
8 END;
9 /

Results Explain Describe Saved SQL History

Function created.

0.05 seconds
```

Using Procedure:

```
1 CREATE OR REPLACE PROCEDURE Display_Sum(N IN NUMBER) IS
2 BEGIN
3 DBMS_OUTPUT.PUT_LINE('Sum of first ' || N || ' numbers is: ' || Sum_N(N));
4 END;
5 /

Results Explain Describe Saved SQL History

Procedure created.

0.04 seconds
```

