Experiment 8

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**Batch** : AIML B8

Aim: **To understand the concepts of PL/SQL programming**.**.**

**Objective :**

Compare values & display the greatest.

Create iterative processes using PL/SQL.

Calculate factorials & understand mathematical operations.

Generate Fibonacci series with proficiency.

Find sums of first N numbers, reinforcing iterative calculation skills.

Theory :

PL/SQL (Procedural Language/Structured Query Language) is Oracle Corporation's procedural extension for SQL (Structured Query Language). It allows users to combine SQL statements with procedural constructs, such as loops, conditional statements, and error handling, to create powerful and flexible database applications.

Procedural Language: PL/SQL is a procedural language, meaning it allows users to write procedural code for implementing business logic and application functionality within the database. This includes defining variables, control flow structures (like loops and conditional statements), and reusable procedures and functions .

**Code**

**-- Question 1: Write a PL/SQL code to accept the value of A, B & C and display which is greater.**

DECLARE

a INT := &a;

b INT := &b;

c INT := &c;

BEGIN

IF a > b AND a > c THEN

DBMS\_OUTPUT.PUT\_LINE('A is greater');

ELSIF b > a AND b > c THEN

DBMS\_OUTPUT.PUT\_LINE('B is greater');

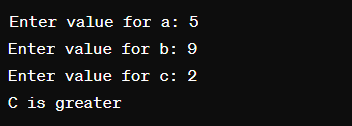
ELSE

DBMS\_OUTPUT.PUT\_LINE('C is greater');

END IF;

END;

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**-- Question 2: Using PL/SQL Statements, create a simple loop that displays the message “**'Hii I’m Wasi’**” 5times.**

DECLARE

counter INT := 1;

BEGIN

WHILE counter <= 4 LOOP

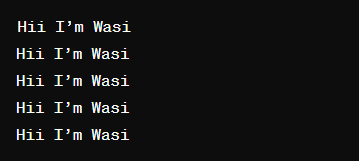
DBMS\_OUTPUT.PUT\_LINE('Hii I’m Wasi’);

counter := counter + 1;

END LOOP;

END;

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**-- Question 3: Write a PL/SQL code block to find the factorial of a number.**

DECLARE

num INT := &num;

factorial INT := 1;

BEGIN

FOR i IN 1..num LOOP

factorial := factorial \* i;

END LOOP;

DBMS\_OUTPUT.PUT\_LINE('Factorial of ' || num || ' is ' || factorial);

END;

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**-- Question 4: Write a PL/SQL program to generate Fibonacci series.**

DECLARE

n INT := &n;

a INT := 0;

b INT := 1;

fib INT;

BEGIN

DBMS\_OUTPUT.PUT\_LINE('Fibonacci Series:');

DBMS\_OUTPUT.PUT(a || ' ');

DBMS\_OUTPUT.PUT(b || ' ');

FOR i IN 3..n LOOP

fib := a + b;

DBMS\_OUTPUT.PUT(fib || ' ');

a := b;

b := fib;

END LOOP;

END;

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**-- Question 5: Write a PL/SQL code to find the sum of the first N numbers.**

DECLARE

n INT := &n;

sum INT := 0;

BEGIN

FOR i IN 1..n LOOP

sum := sum + i;

END LOOP;

DBMS\_OUTPUT.PUT\_LINE('Sum of first ' || n || ' numbers is ' || sum);

END;

