**Question – 1 :**

**Write a PL/SQL program to display the following format:**



DECLARE

v\_line VARCHAR2(20);

BEGIN

-- First line

v\_line := '1';

DBMS\_OUTPUT.PUT\_LINE(v\_line);

-- Second line

v\_line := '1 2';

DBMS\_OUTPUT.PUT\_LINE(v\_line);

-- Third line

v\_line := '1 2 3';

DBMS\_OUTPUT.PUT\_LINE(v\_line);

-- Fourth line

v\_line := '1 2';

DBMS\_OUTPUT.PUT\_LINE(v\_line);

-- Fifth line

v\_line := '1';

DBMS\_OUTPUT.PUT\_LINE(v\_line);

END;

**Question – 2 :**

**Create a PL/SQL program that generates the Fibonacci sequence.**

DECLARE

v\_num1 NUMBER := 0;

v\_num2 NUMBER := 1;

v\_next NUMBER;

v\_count NUMBER := 10; -- Number of terms to generate

BEGIN

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

DBMS\_OUTPUT.PUT\_LINE(v\_num1);

DBMS\_OUTPUT.PUT\_LINE(v\_num2);

FOR i IN 3..v\_count LOOP

v\_next := v\_num1 + v\_num2;

DBMS\_OUTPUT.PUT\_LINE(v\_next);

v\_num1 := v\_num2;

v\_num2 := v\_next;

END LOOP;

END;

**Question – 3 :**

**Write a PL/SQL program to display the details of top 8 employee in the**

**company.**

DECLARE

CURSOR top\_employees IS

SELECT employee\_id, employee\_name, salary

FROM employees

ORDER BY salary DESC

FETCH FIRST 8 ROWS ONLY; -- This clause is for Oracle 12c and later

BEGIN

DBMS\_OUTPUT.PUT\_LINE('Top 8 Employees:');

FOR emp IN top\_employees LOOP

DBMS\_OUTPUT.PUT\_LINE('ID: ' || emp.employee\_id || ', Name: ' || emp.employee\_name || ', Salary: ' || emp.salary);

END LOOP;

END;

**Question – 4:**

**Write a PL/SQL program to calculate the factorial of a number.**

DECLARE

v\_number NUMBER := 5; -- Change this value to calculate the factorial of a different number

v\_factorial NUMBER := 1;

BEGIN

FOR i IN REVERSE 1..v\_number LOOP

v\_factorial := v\_factorial \* i;

END LOOP;

DBMS\_OUTPUT.PUT\_LINE('The factorial of ' || v\_number || ' is ' || v\_factorial);

END;

**Question – 5:**

**Write a PL/SQL program to find all prime numbers up to a given number**

DECLARE

v\_limit NUMBER := 50; -- Change this value to find primes up to a different number

v\_is\_prime BOOLEAN;

BEGIN

DBMS\_OUTPUT.PUT\_LINE('Prime numbers up to ' || v\_limit || ':');

FOR i IN 2..v\_limit LOOP

v\_is\_prime := TRUE;

FOR j IN 2..FLOOR(SQRT(i)) LOOP

IF i MOD j = 0 THEN

v\_is\_prime := FALSE;

EXIT;

END IF;

END LOOP;

IF v\_is\_prime THEN

DBMS\_OUTPUT.PUT\_LINE(i);

END IF;

END LOOP;

END;

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