CYCLE 2 – PL/SQL

**Exp No:12**

**PL/SQL Introduction.**

**AIM:** To implement various various control structures like IF-THEN,IF-THEN-ELSE,IF-THEN ELSIF,CASE ,WHILE USING PL/SQL

Procedural Language/Structured Query Language (PL/SQL) is an extension of SQL

Basic Syntax of PL/SQL

*DECLARE*

*/\* Variables can be declared here \*/*

*BEGIN*

*/\* Executable statements can be written here \*/*

*EXCEPTION*

*/\* Error handlers can be written here. \*/*

*END;*

As we want output of PL/SQL Program on screen, before Starting writing anything type (Only

Once per session)

SET SERVEROUTPUT ON

**Sample 1: Hello World Program**

*DECLARE*

*age integer;*

*name VARCHAR(20);*

*BEGIN*

*dbms\_output.put\_line('Hello world');*

*END;*

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**Sampe 2**: **Find the largest of two integers.**

(Use of “If else” in PL/SQL)

*DECLARE*

*a integer := &a;*

*b integer := &b;*

*BEGIN*

*if (a > b) then*

*dbms\_output.put\_line(a || ' is the largest number');*

*else*

*dbms\_output.put\_line(b || ' is the largest number');*

*end if;*

*END;*

**Sample 3**: **Print the range of two integers.**

**(Use of if elsif ladder)**

*DECLARE*

*c integer := &c;*

*BEGIN*

*if (c >= 0 and c < 10) then*

*dbms\_output.put\_line(' is less than 10');*

*elsif (c >= 10 and c < 20) then*

*dbms\_output.put\_line(' is less than 20');*

*elsif (c >= 20 and c < 30) then*

*dbms\_output.put\_line(' is less than 30');*

*else*

*dbms\_output.put\_line(' is grater than or equal 30');*

*end if;*

*END;*

***Sample 4****:* ***Print the performance rating.***

***(Use of case statement)***

*DECLARE*

*c char(1) := '&c';*

*BEGIN*

*case c*

*when 'A' then dbms\_output.put\_line('Excellent');*

*when 'B' then dbms\_output.put\_line('Very good');*

*when 'C' then dbms\_output.put\_line('Well done');*

*when 'D' then dbms\_output.put\_line('You passed');*

*when 'F' then dbms\_output.put\_line('Better try again');*

*else dbms\_output.put\_line('No such grade');*

*end case;*

*END;*

***Sample 5: Use of Array and Loops in PL/SQL***

***Please note:***

***- Default index starts from 1***

***- D*eclared using the TYPE keyword**

*DECLARE*

*type intArray IS VARRAY(10) OF INTEGER;*

*type namesArray IS VARRAY(5) OF VARCHAR2(5);*

*arr intArray;*

*names namesArray;*

*i integer;*

*BEGIN*

*arr := intArray(1,5,2,3,6,7,4,8,9,10);*

*names := namesArray('Alice', 'Bob', 'Cindy', 'Sam', 'Eric');*

*i := 1;*

*/\*While loop...! \*/*

*while( i <= 10) loop*

*dbms\_output.put\_line('arr[' || i ||'] =' ||arr(i));*

*i := i+1;*

*end loop;*

*/\*For loop...! \*/*

*for i in 1 .. 10 loop*

*dbms\_output.put\_line('arr[' || i ||'] =' ||arr(i));*

*end loop;*

*/\* while loop \*/*

*i := 1;*

*while( i <= 5) loop*

*dbms\_output.put\_line('names[' || i ||'] =' ||names(i));*

*i := i+1;*

*end loop;*

*/\*For loop...! \*/*

*for i in 1 .. 5 loop*

*dbms\_output.put\_line('names[' || i ||'] =' ||names(i));*

*end loop;*

*END;*

***Question 1: Write a plsql program to check whether a given number is ODD or EVEN***

*DECLARE*

*number integer;*

*BEGIN*

*-- get role no from user*

*number := &number;*

*--TODO calculate & print result*

*END;*

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***Question 2: Write a PL/SQL block to find the maximum number from given three numbers.***

*DECLARE*

*number1 integer := &number1;*

*number2 integer := &number2;*

*number3 integer := &number3;*

*BEGIN*

*--TODO calculate & print result*

*END;*

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***Question 3: Write a program to accept a number and find the sum of the digits***

*DECLARE*

*num integer :=&num;*

*total integer:=0;*

*digit integer:=0;*

*BEGIN*

*--TODO calculate & print result*

*END;*

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***Question 4: Write a program to accept a number and find the sum of the digits***

*DECLARE*

*num integer :=&num;*

*total integer:=0;*

*digit integer:=0;*

*BEGIN*

*while (num !=0) loop*

*digit := mod(num,10);*

*total := total + digit;*

*num := trunc(num/10);*

*end loop;*

*dbms\_output.put\_line('sum of digits of given number is '||total);*

*END;*

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***Question 5: Program to print the days names in the week.***

*DECLARE*

*d number:=&num1;*

*BEGIN*

*case d*

*when 1 then*

*dbms\_output.put\_line('sunday');*

*when 2 then*

*dbms\_output.put\_line('monday');*

*when 3 then*

*dbms\_output.put\_line('tuesday');*

*when 4 then*

*dbms\_output.put\_line('wednesday');*

*when 5 then*

*dbms\_output.put\_line('thursday');*

*when 6 then*

*dbms\_output.put\_line('friday');*

*when 7 then*

*dbms\_output.put\_line('saturday');*

*else*

*dbms\_output.put\_line('invalid day');*

*end case;*

*END;*

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