Parul University

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PIET_Oracle DBMS_Course

PIET_Oracle DBMS_Session 10_COD

Attempt : 2
Total Mark : 50
Marks Obtained : 50

Section 1 : COD

1. Problem Statement:

Rahul is a software engineer at a tech company. He is working on a small program that allows him to quickly calculate the sum of two numbers. To make his task easier, he decides to write a PL/SQL block that accepts two numbers and computes their sum.

Task:Write a PL/SQL block that takes two numbers as input and outputs their sum "The sum of <number1> and <number2> is <sum>"

Table Details:

Symbol refers to the primary key

Symbol refers to the Foreign key

NN refers to Not NULL

Sample Input Records:

Answer

oracle.sql

```
DECLARE
  num1 NUMBER;
  num2 NUMBER;
  result NUMBER;
BEGIN

  SELECT NUMBER1, NUMBER2 INTO num1, num2 FROM NUMBERS WHERE 
NUMBER1 = 10 AND NUMBER2 = 20;

  result := num1 + num2;

  DBMS_OUTPUT.PUT_LINE('The sum of ' || num1 || ' and ' || num2 || ' is ' || result);
END;
/
```

Status : Correct ***Marks : 10/10***

2. Problem Statement:

A civil engineer, Priya, is designing a new building and needs to quickly calculate the areas of different shapes for the floor plan. She decides to write a PL/SQL block to compute the areas for the rectangle, triangle, and square. The dimensions of each shape vary, and Priya needs to calculate the area for all three shapes.

Task:Write a PL/SQL block that calculates and displays the areas for the rectangle, triangle, and square using appropriate formulas.

Rectangle Area = Length * WidthTriangle Area = 0.5 * Base * HeightSquare Area = Side * Side

Table Details:

Symbol refers to the primary key

Symbol refers to the Foreign key

NN refers to Not NULL

Sample Input Records:

Answer

oracle.sql

```
DECLARE
  CURSOR shape_cur IS
    SELECT RECT_LENGTH, RECT_WIDTH, TRI_BASE, TRI_HEIGHT, SQUARE_SIDE
    FROM SHAPE_DIMENSIONS;

  rect_area   NUMBER;
  tri_area    NUMBER;
  square_area NUMBER;
BEGIN
  FOR rec IN shape_cur LOOP
    rect_area := rec.RECT_LENGTH * rec.RECT_WIDTH;
    tri_area := 0.5 * rec.TRI_BASE * rec.TRI_HEIGHT;
    square_area := rec.SQUARE_SIDE * rec.SQUARE_SIDE;

    DBMS_OUTPUT.PUT_LINE('Rectangle Area = ' || TO_CHAR(rect_area));
    DBMS_OUTPUT.PUT_LINE('Triangle Area = ' || TO_CHAR(tri_area));
    DBMS_OUTPUT.PUT_LINE('Square Area = ' || TO_CHAR(square_area));
    DBMS_OUTPUT.PUT_LINE('------------------------------');
  END LOOP;
END;
/
```

Status** : Correct* ***Marks : 10/10

3. Problem Statement:

During a math class, Professor Raj is solving problems and needs to quickly find the maximum of three numbers for a few students. To save time, he decides to create a PL/SQL block that accepts three numbers and finds the largest of them.

Task:Write a PL/SQL block that takes three numbers as input and displays the maximum of the three.

Table Details:

Symbol refers to the primary key

Symbol refers to the Foreign key

NN refers to Not NULL

Sample Input Records:

Answer

oracle.sql

```
DECLARE
  v_num1 NUMBER;
  v_num2 NUMBER;
  v_num3 NUMBER;
  v_max NUMBER;

  CURSOR c_numbers IS
    SELECT num1, num2, num3 FROM numbers;
BEGIN
  FOR rec IN c_numbers LOOP
```

```
    v_num1 := rec.num1;
    v_num2 := rec.num2;
    v_num3 := rec.num3;

    v_max := GREATEST(v_num1, v_num2, v_num3);

    DBMS_OUTPUT.PUT_LINE('The maximum number is: ' || v_max);
  END LOOP;
END;
/
```

Status : Correct ***Marks : 10/10***

4. Problem Statement:

Manoj is a student who needs to calculate the sum of the first N numbers as part of his homework. To make the task easier, he decides to write a PL/SQL block that computes the sum using a FOR loop.

Task:

Write a PL/SQL block that takes an integer N as input and prints the sum of numbers from 1 to N using a FOR loop.

Table Details:

Symbol refers to the primary key

Symbol refers to the Foreign key

NN refers to Not NULL

Sample Input Records:

Answer

oracle.sql

```
DECLARE
  v_n NUMBER;
  v_sum NUMBER;

  CURSOR c_numbers IS
    SELECT n FROM numbers;
BEGIN
  FOR rec IN c_numbers LOOP
    v_n := rec.n;
    v_sum := 0;

    FOR i IN 1..v_n LOOP
      v_sum := v_sum + i;
    END LOOP;

    DBMS_OUTPUT.PUT_LINE('The sum of numbers from 1 to ' || v_n || ' is: ' ||
v_sum);
  END LOOP;
END;
/
```

Status : Correct ***Marks : 10/10***

5. Problem Statement:

Maya is working on a project where she needs to generate the Fibonacci series up to N numbers. To do this, she decides to write a PL/SQL block that takes N as input and generates the Fibonacci series.

Task:

Write a PL/SQL block that generates the Fibonacci series up to N numbers.

Table Details:

Symbol refers to the primary key

Symbol refers to the Foreign key

NN refers to Not NULL

Sample Input Records:

Answer

oracle.sql

```
SET SERVEROUTPUT ON;

DECLARE
  v_n NUMBER;
  v_first NUMBER;
  v_second NUMBER;
  v_next NUMBER;
BEGIN
  FOR rec IN (SELECT n FROM fibonacci) LOOP
    v_n := rec.n;

    v_first := 0;
    v_second := 1;

    DBMS_OUTPUT.PUT_LINE('Fibonacci sequence up to ' || v_n || ' terms:');

    IF v_n >= 1 THEN
      DBMS_OUTPUT.PUT(v_first || ' ');
    END IF;

    IF v_n >= 2 THEN
      DBMS_OUTPUT.PUT(v_second || ' ');
    END IF;

    FOR i IN 3..v_n LOOP
      v_next := v_first + v_second;
      DBMS_OUTPUT.PUT(v_next || ' ');
      v_first := v_second;
      v_second := v_next;
    END LOOP;

    DBMS_OUTPUT.NEW_LINE;
```

```
  END LOOP;
END;
/
```

Status : Correct **Marks : 10/10**