**Introduction to PL/SQL Conditions**

In PL/SQL, conditions allow decision-making in programs. The two main types of conditional statements are:

**IF-THEN**

**IF-THEN-ELSE**

**IF-THEN-ELSIF-ELSE**

**CASE Statement**

**IF-THEN Statement**

Executes a block of code if the condition is TRUE.

**Example: Check if a number is positive**

SET SERVEROUTPUT ON;

DECLARE

num NUMBER := 10;

BEGIN

IF num > 0 THEN

DBMS\_OUTPUT.PUT\_LINE('The number is positive.');

END IF;

END;

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**IF-THEN-ELSE Statement**

Executes one block if the condition is TRUE, otherwise executes another block. **Example: Check if a number is even or odd**

SET SERVEROUTPUT ON;

DECLARE

num NUMBER := 7;

BEGIN

IF MOD(num, 2) = 0 THEN

DBMS\_OUTPUT.PUT\_LINE('Even number');

ELSE

DBMS\_OUTPUT.PUT\_LINE('Odd number');

END IF;

END;

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**IF-THEN-ELSIF-ELSE Statement**

Check multiple conditions one by one.

**Example: Check if a number is positive, negative, or zero**

SET SERVEROUTPUT ON;

DECLARE

num NUMBER := -5;

BEGIN

IF num > 0 THEN

DBMS\_OUTPUT.PUT\_LINE('Positive number');

ELSIF num < 0 THEN

DBMS\_OUTPUT.PUT\_LINE('Negative number');

ELSE

DBMS\_OUTPUT.PUT\_LINE('Zero');

END IF;

END;

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**CASE Statement**

The CASE statement is used to handle multiple conditions more efficiently. **Example: Grade Calculation Using CASE**

SET SERVEROUTPUT ON;

DECLARE

marks NUMBER := 85;

grade VARCHAR2(10);

BEGIN

grade := CASE

WHEN marks >= 90 THEN 'A'

WHEN marks >= 80 THEN 'B'

WHEN marks >= 70 THEN 'C'

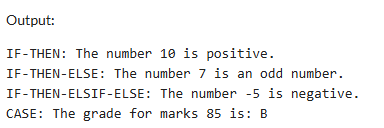
ELSE 'Fail'

END;

DBMS\_OUTPUT.PUT\_LINE('Grade: ' || grade);

END;

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**Simple Tasks for Practice**

1. Write a PL/SQL program to check whether a number is **divisible by 5**. 2. Modify the **grade program** to include more conditions (e.g., 60-70 for **D**, below 60 for **F**). 3. Write a **CASE statement** to display the day of the week based on a number input (1 = Monday, 2 = Tuesday, etc.).

4. Create a program that **checks the largest of three numbers** using IF-THEN-ELSIF.

SET SERVEROUTPUT ON;

DECLARE

-- Variables for various tasks

num NUMBER := 25; -- For checking divisibility by 5

marks NUMBER := 85; -- For grade calculation

grade VARCHAR2(10);

day\_number NUMBER := 3; -- For checking day of the week

num1 NUMBER := 10; -- For checking largest of three numbers

num2 NUMBER := 20;

num3 NUMBER := 5;

BEGIN

-- Task 1: Check if a number is divisible by 5

IF MOD(num, 5) = 0 THEN

DBMS\_OUTPUT.PUT\_LINE('Task 1: The number ' || num || ' is divisible by 5.');

ELSE

DBMS\_OUTPUT.PUT\_LINE('Task 1: The number ' || num || ' is not divisible by 5.');

END IF;

-- Task 2: Grade calculation with more conditions

grade := CASE

WHEN marks >= 90 THEN 'A'

WHEN marks >= 80 THEN 'B'

WHEN marks >= 70 THEN 'C'

WHEN marks >= 60 THEN 'D'

ELSE 'F'

END;

DBMS\_OUTPUT.PUT\_LINE('Task 2: Grade for marks ' || marks || ' is: ' || grade);

-- Task 3: Display the day of the week based on number input

CASE day\_number

WHEN 1 THEN DBMS\_OUTPUT.PUT\_LINE('Task 3: Day 1 is Monday.');

WHEN 2 THEN DBMS\_OUTPUT.PUT\_LINE('Task 3: Day 2 is Tuesday.');

WHEN 3 THEN DBMS\_OUTPUT.PUT\_LINE('Task 3: Day 3 is Wednesday.');

WHEN 4 THEN DBMS\_OUTPUT.PUT\_LINE('Task 3: Day 4 is Thursday.');

WHEN 5 THEN DBMS\_OUTPUT.PUT\_LINE('Task 3: Day 5 is Friday.');

WHEN 6 THEN DBMS\_OUTPUT.PUT\_LINE('Task 3: Day 6 is Saturday.');

WHEN 7 THEN DBMS\_OUTPUT.PUT\_LINE('Task 3: Day 7 is Sunday.');

ELSE DBMS\_OUTPUT.PUT\_LINE('Task 3: Invalid day number.');

END CASE;

-- Task 4: Find the largest of three numbers using IF-THEN-ELSIF

IF num1 >= num2 AND num1 >= num3 THEN

DBMS\_OUTPUT.PUT\_LINE('Task 4: The largest number is ' || num1);

ELSIF num2 >= num1 AND num2 >= num3 THEN

DBMS\_OUTPUT.PUT\_LINE('Task 4: The largest number is ' || num2);

ELSE

DBMS\_OUTPUT.PUT\_LINE('Task 4: The largest number is ' || num3);

END IF;

END;

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