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**Branch: CSE(AI & ML)** **Section/Group: 24AIT_KRG-1/G2**
**Semester: 4** **Date of Performance: 30/01/2026**
**Subject Name: Database Management System** **Subject Code: 24CSH-298**

# Experiment – 4

## 1. Aim of the Session

To design and implement PL/SQL programs utilizing conditional control statements such as IF–ELSE, ELSIF, ELSIF ladder, and CASE constructs in order to control the flow of execution based on logical conditions and to analyze decision-making capabilities in PL/SQL blocks.

## 2. Software Requirements

Database Management System: Oracle Database

Database Administration Tool: Oracle SQL Developer

## 3. Objectives

- To understand conditional control statements in PL/SQL.
- To implement IF–ELSE statements in PL/SQL blocks.
- To implement IF–ELSIF–ELSE ladder.
- To use CASE statements for decision making.
- To analyze program execution based on conditions.

## 4. Procedure of the Experiment

1. Open Oracle SQL Developer / Oracle Live SQL.

2. Enable output using the command: `SET SERVEROUTPUT ON;`
3. Write the required PL/SQL block using conditional statements.
4. Compile and execute the program.
5. Observe the output displayed using `DBMS_OUTPUT.PUT_LINE`.
6. Modify input values to verify different conditions.

## 5. Practical / Experiment Steps

### Program 1: IF–ELSE Statement

```
DECLARE
   num NUMBER := -5;
BEGIN
   IF num > 0 THEN
      DBMS_OUTPUT.PUT_LINE('The number is Positive');
   ELSE
      DBMS_OUTPUT.PUT_LINE('The number is Non-Positive');
   END IF;
END;
/
```

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### Program 2: IF–ELSIF–ELSE Statement

```
DECLARE
   marks NUMBER := 78;
BEGIN
   IF marks >= 90 THEN
```



```
    DBMS_OUTPUT.PUT_LINE('Grade: A');
  ELSIF marks >= 75 THEN
    DBMS_OUTPUT.PUT_LINE('Grade: B');
  ELSIF marks >= 60 THEN
    DBMS_OUTPUT.PUT_LINE('Grade: C');
  ELSE
    DBMS_OUTPUT.PUT_LINE('Grade: Fail');
  END IF;
END;
/
```

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**Program 3: ELSIF Ladder (Performance Status)**

```
DECLARE
  marks NUMBER := 65;
BEGIN
  IF marks >= 85 THEN
    DBMS_OUTPUT.PUT_LINE('Performance: Excellent');
  ELSIF marks >= 70 THEN
    DBMS_OUTPUT.PUT_LINE('Performance: Very Good');
  ELSIF marks >= 50 THEN
    DBMS_OUTPUT.PUT_LINE('Performance: Good');
  ELSE
    DBMS_OUTPUT.PUT_LINE('Performance: Poor');
  END IF;
END;
/
```

---

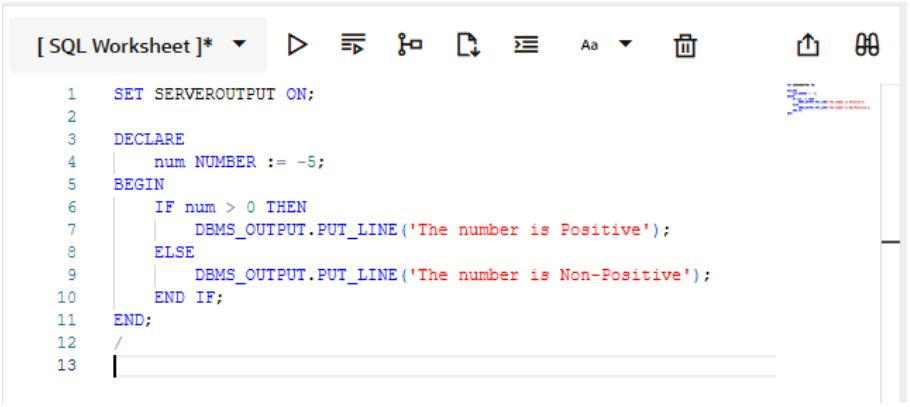
**Program 4: CASE Statement (Day Name)**

```
DECLARE
   day_no NUMBER := 3;
BEGIN
   CASE day_no
      WHEN 1 THEN DBMS_OUTPUT.PUT_LINE('Monday');
      WHEN 2 THEN DBMS_OUTPUT.PUT_LINE('Tuesday');
      WHEN 3 THEN DBMS_OUTPUT.PUT_LINE('Wednesday');
      WHEN 4 THEN DBMS_OUTPUT.PUT_LINE('Thursday');
      WHEN 5 THEN DBMS_OUTPUT.PUT_LINE('Friday');
      WHEN 6 THEN DBMS_OUTPUT.PUT_LINE('Saturday');
      WHEN 7 THEN DBMS_OUTPUT.PUT_LINE('Sunday');
      ELSE
         DBMS_OUTPUT.PUT_LINE('Invalid Day Number');
   END CASE;
END;
/
```

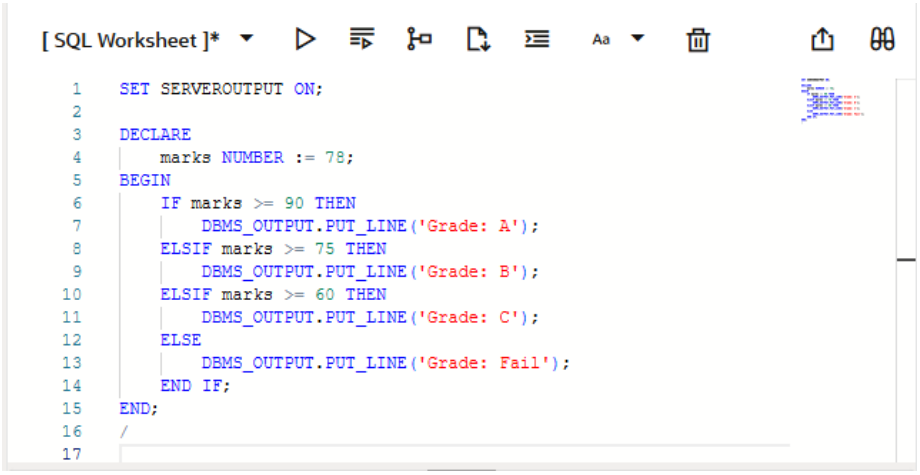
## 6. Input / Output Details and Screenshot

Program (Input):

**Program 1: IF–ELSE Statement**



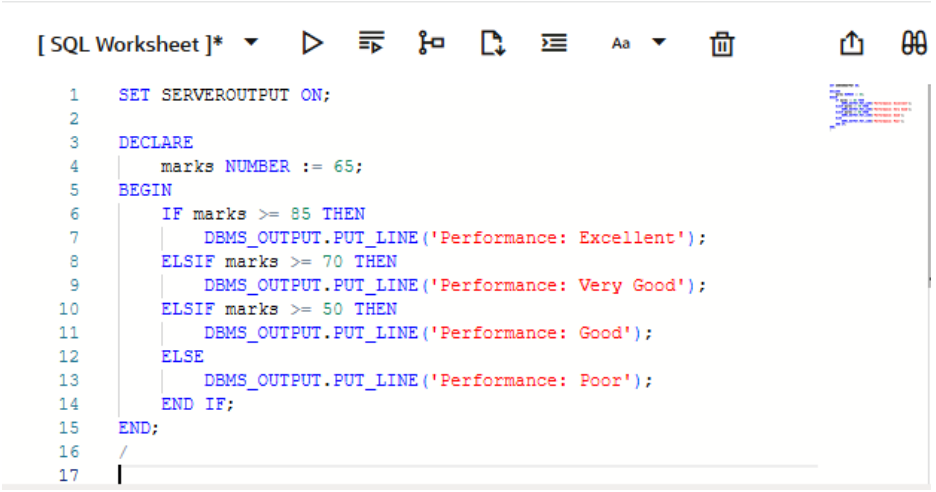
## Program 2: IF–ELSIF–ELSE Statement



```
SET SERVEROUTPUT ON;

DECLARE
    marks NUMBER := 78;
BEGIN
    IF marks >= 90 THEN
        DBMS_OUTPUT.PUT_LINE('Grade: A');
    ELSIF marks >= 75 THEN
        DBMS_OUTPUT.PUT_LINE('Grade: B');
    ELSIF marks >= 60 THEN
        DBMS_OUTPUT.PUT_LINE('Grade: C');
    ELSE
        DBMS_OUTPUT.PUT_LINE('Grade: Fail');
    END IF;
END;
/
```

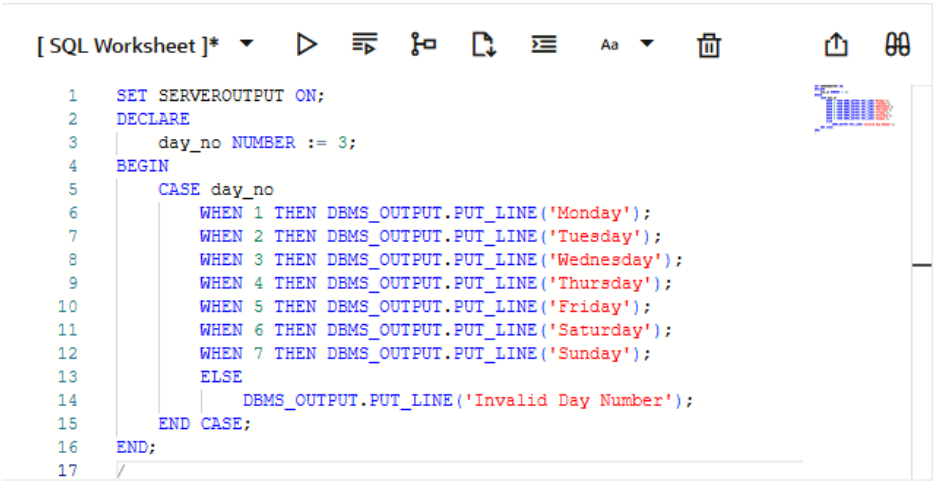
## Program 3: ELSIF Ladder



```
SET SERVEROUTPUT ON;

DECLARE
    marks NUMBER := 65;
BEGIN
    IF marks >= 85 THEN
        DBMS_OUTPUT.PUT_LINE('Performance: Excellent');
    ELSIF marks >= 70 THEN
        DBMS_OUTPUT.PUT_LINE('Performance: Very Good');
    ELSIF marks >= 50 THEN
        DBMS_OUTPUT.PUT_LINE('Performance: Good');
    ELSE
        DBMS_OUTPUT.PUT_LINE('Performance: Poor');
    END IF;
END;
/
```

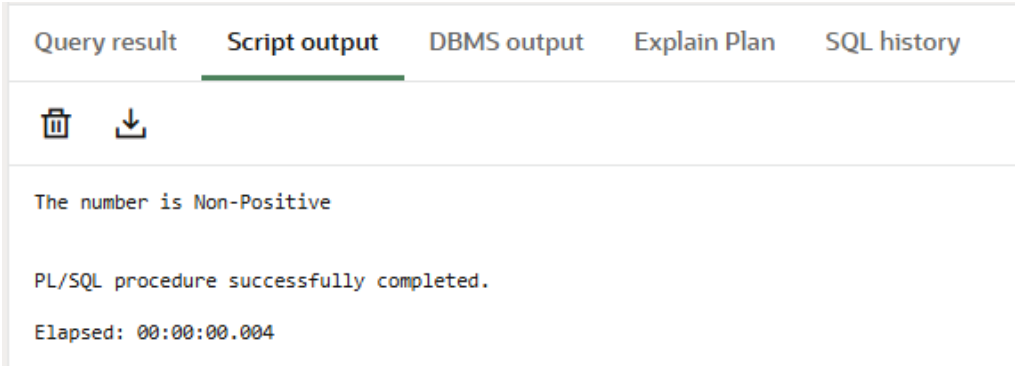
## Program 4: CASE Statement



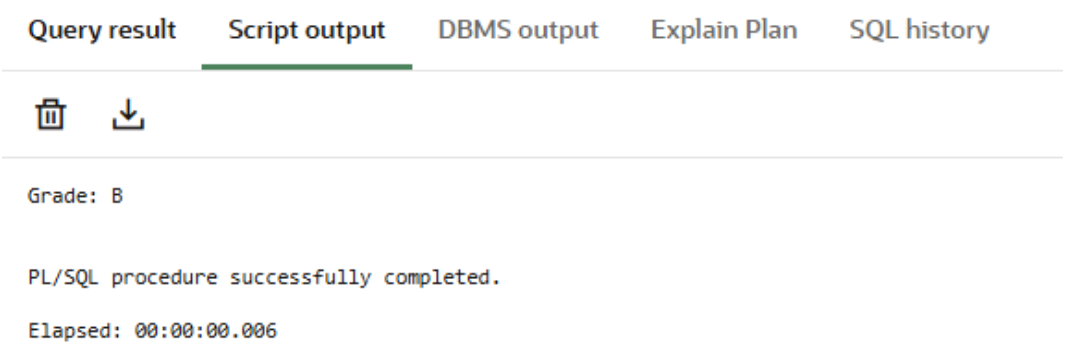
```
SET SERVEROUTPUT ON;
DECLARE
    day_no NUMBER := 3;
BEGIN
    CASE day_no
        WHEN 1 THEN DBMS_OUTPUT.PUT_LINE('Monday');
        WHEN 2 THEN DBMS_OUTPUT.PUT_LINE('Tuesday');
        WHEN 3 THEN DBMS_OUTPUT.PUT_LINE('Wednesday');
        WHEN 4 THEN DBMS_OUTPUT.PUT_LINE('Thursday');
        WHEN 5 THEN DBMS_OUTPUT.PUT_LINE('Friday');
        WHEN 6 THEN DBMS_OUTPUT.PUT_LINE('Saturday');
        WHEN 7 THEN DBMS_OUTPUT.PUT_LINE('Sunday');
        ELSE
            DBMS_OUTPUT.PUT_LINE('Invalid Day Number');
    END CASE;
END;
/
```

Output:

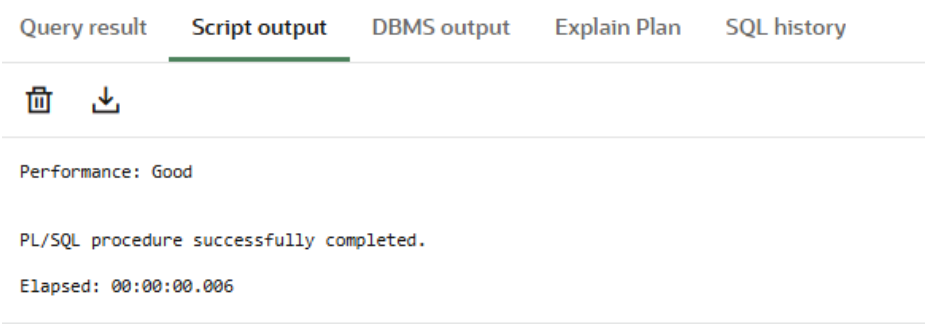
## Program 1: IF–ELSE Statement




## Program 2: IF–ELSIF–ELSE Statement




## Program 3: ELSIF Ladder




## Program 4: CASE Statement

7. Learning Outcome

- Learned how to use IF–ELSE, ELSIF ladder, and CASE statements in PL/SQL.
- Understood decision-making using conditional control structures.
- Gained practical knowledge of writing PL/SQL blocks.
- Improved understanding of logical flow control in database programming.