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Semester: 4
Subject Name: Database Management System

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Date of Performance: 13/01/2026
Subject Code: 24CSH-298

Experiment – 3

1. Aim of the Session

To understand the basic structure of a PL/SQL program by creating and executing a simple PL/SQL block that includes Declaration and Execution sections and to display output using built-in procedures.

2. Software Requirements

Database Management System: Oracle Database

Database Administration Tool: Oracle SQL Developer

3. Objectives

- To learn the structure of a PL/SQL block.
- To use the DECLARE section for variable declaration.
- To use the BEGIN...END block for execution.
- To display output using `DBMS_OUTPUT.PUT_LINE`.

4. Procedure of the Experiment

1. Open Oracle SQL Developer and connect to the Oracle database.
2. Open a new SQL Worksheet.

3. Enable server output using **SET SERVEROUTPUT ON;**.
4. Write a PL/SQL program with:
 - Declaration section for variables
 - Execution section for calculations and output
5. Execute the program and observe the results in the output window.

5. Practical / Experiment Steps

1. Enable server output: **SET SERVEROUTPUT ON;**
2. Declare variables: **emp_id**, **emp_name**, **birth_year**, **current_year**, and **age**.
3. Assign values to the variables.
4. Calculate age as **age := current_year - birth_year;**.
5. Display all values using **DBMS_OUTPUT.PUT_LINE**.
6. End the PL/SQL block using **END;** and execute with **/**.

6. Input / Output Details and Screenshot

Program (Input):

```
[ SQL Worksheet ]*  ▶  ⚙  🔍  📄  ⌵  Aa  🗑

1  SET SERVEROUTPUT ON;
2
3  DECLARE
4      emp_id NUMBER := 101;
5      emp_name VARCHAR2(50) := 'Bhavya';
6      birth_year NUMBER := 2006;
7      current_year NUMBER := 2026;
8      age NUMBER;
9  BEGIN
10     age := current_year - birth_year;
11
12     DBMS_OUTPUT.PUT_LINE('Employee ID: ' || emp_id);
13     DBMS_OUTPUT.PUT_LINE('Employee Name: ' || emp_name);
14     DBMS_OUTPUT.PUT_LINE('Birth Year: ' || birth_year);
15     DBMS_OUTPUT.PUT_LINE('Current Year: ' || current_year);
16     DBMS_OUTPUT.PUT_LINE('Age: ' || age || ' years');
17 END;
```

Output:

```
Query result  Script output  DBMS output  Explain Plan  SQL history

Employee ID: 101
Employee Name: Bhavya
Birth Year: 2006
Current Year: 2026
Age: 20 years

PL/SQL procedure successfully completed.

Elapsed: 00:00:00.008
```

7. Learning Outcome

- Understood the basic structure of a PL/SQL block.
- Learned how to declare and initialize variables.
- Learned how to execute statements inside BEGIN...END block.
- Learned how to display output using `DBMS_OUTPUT.PUT_LINE`.