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Section/Group:24AIT-KRG1/G2

Semester:4th

Subject Name: DBMS

1. Aim

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.

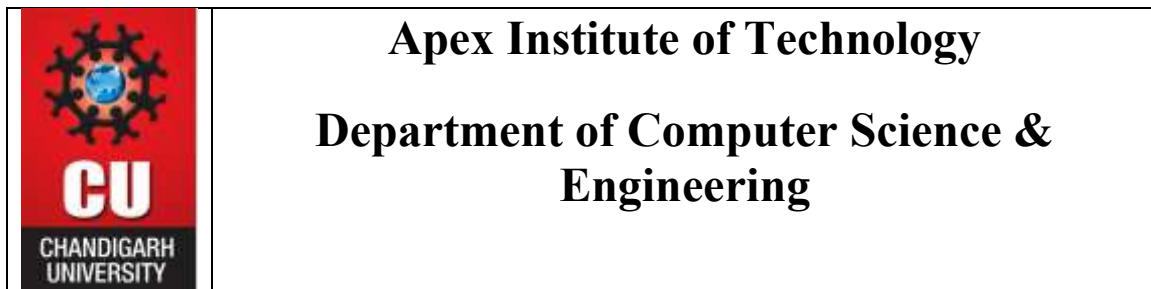
2. Objective of the Session

- To understand the basic structure of an Oracle PL/SQL block
- To learn variable declaration and initialization in PL/SQL
- To implement procedural logic using the BEGIN-END execution block
- To display output using built-in procedures such as DBMS_OUTPUT.PUT_LINE
- To strengthen foundational PL/SQL skills required for database programming, backend development, and technical interviews

3. Theory

1. A PL/SQL block consists of three main sections:

Declaration Section (DECLARE)



- Variables, constants, cursors are declared here.

Execution Section (BEGIN ... END)

- Contains executable statements.

Exception Section (EXCEPTION) (*optional*)

Think of it like a human:

- **DECLARE** → Memory
- **BEGIN** → Action
- **END** → Closure

4. Problem Statement

Design and implement a simple PL/SQL program that demonstrates the **basic structure of a PL/SQL block**.

The program should:

1. Declare variables for employee details
2. Assign values to those variables
3. Display the values using output statements

5. Procedure of the Practical

1. Open **pgAdmin / SQL environment** (conceptual PL/SQL execution).
2. Enable server output:
3. SET SERVER OUTPUT ON;
4. Write a PL/SQL block with:
 - Employee ID
 - Employee Name
 - Employee Salary
5. Assign values inside the execution section.
6. Display output using DBMS_OUTPUT.PUT_LINE.
7. Execute the block and observe the output.

5. I/O Analysis (Input / Output Analysis)

Input:

Variable	Value
Emp_id	101
Emp_name	Rahul Sharma
Emp_salary	45000

Output:

Employee ID : 101

Employee Name : Rahul Sharma

Employee Salary : 45000

SQL Implementation (PgAdmin / PostgreSQL)

DECLARE

emp_id NUMBER := 101;

emp_name VARCHAR2(50) := 'Amit Sharma';

emp_salary NUMBER := 45000;

BEGIN

DBMS_OUTPUT.PUT_LINE('Employee Details');

DBMS_OUTPUT.PUT_LINE('-----');

DBMS_OUTPUT.PUT_LINE('Employee ID : ' || emp_id);

DBMS_OUTPUT.PUT_LINE('Employee Name : ' || emp_name);

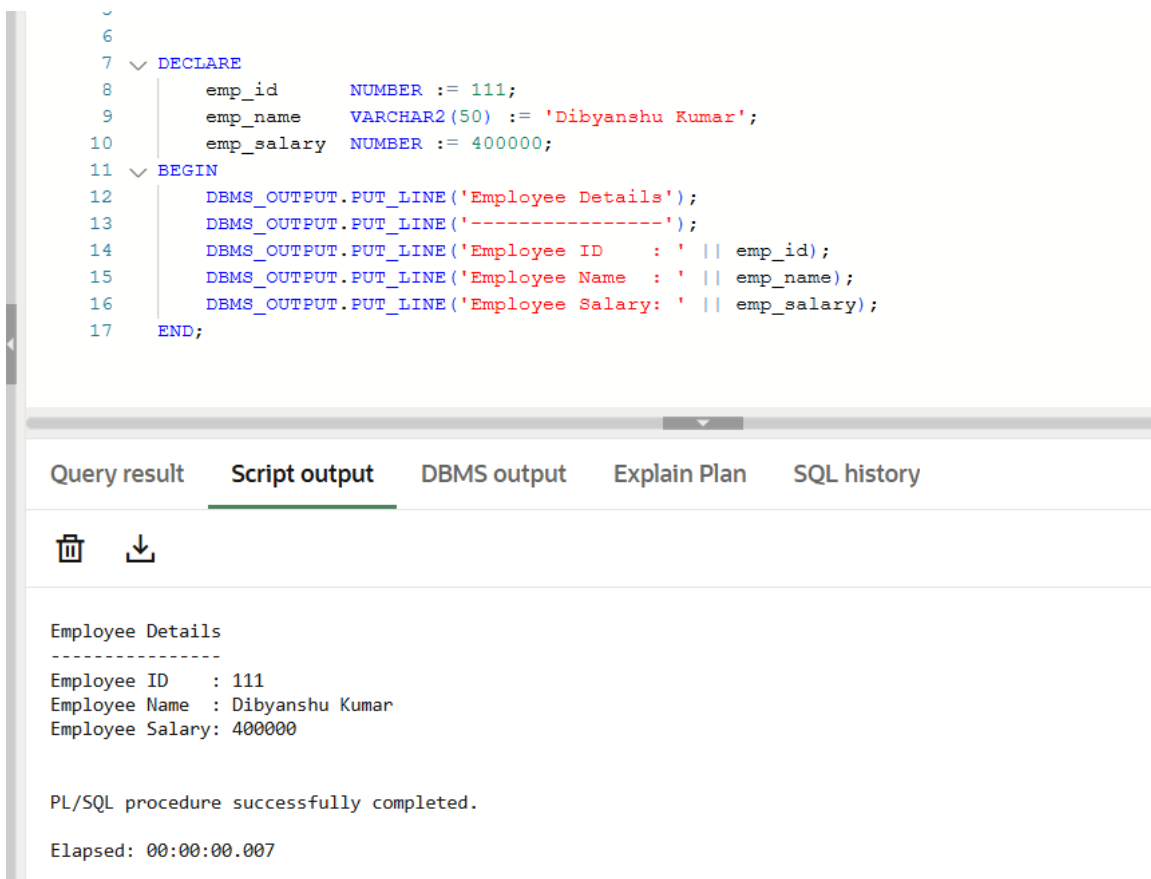
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DBMS_OUTPUT.PUT_LINE('Employee Salary: ' || emp_salary);
```

END;

7. Learning Outcomes

- Understand the **basic structure of a PL/SQL block**
- Declare and initialize variables in PL/SQL
- Use the **BEGIN–END** execution block
- Display output using DBMS_OUTPUT.PUT_LINE
- Develop confidence in writing simple procedural database programs

7. Screenshots



```

6
7 DECLARE
8     emp_id      NUMBER := 111;
9     emp_name    VARCHAR2(50) := 'Dibyanshu Kumar';
10    emp_salary  NUMBER := 400000;
11 BEGIN
12     DBMS_OUTPUT.PUT_LINE('Employee Details');
13     DBMS_OUTPUT.PUT_LINE('-----');
14     DBMS_OUTPUT.PUT_LINE('Employee ID      : ' || emp_id);
15     DBMS_OUTPUT.PUT_LINE('Employee Name : ' || emp_name);
16     DBMS_OUTPUT.PUT_LINE('Employee Salary: ' || emp_salary);
17 END;

```

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

Employee Details

Employee ID : 111
Employee Name : Dibyanshu Kumar
Employee Salary: 400000

PL/SQL procedure successfully completed.

Elapsed: 00:00:00.007