

## EXPERIMENT 3

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### Experiment 3 – PL/SQL Salary and Bonus Calculation

#### Experiment

Experiment 3: Calculating employee salary and applying a bonus using PL/SQL. This experiment demonstrates variable declaration, arithmetic operations, and displaying output using DBMS\_OUTPUT.PUT\_LINE.

#### Aim

The aim of this experiment is to practice writing PL/SQL blocks that perform calculations on employee data, calculate bonuses, and display results in a structured format.

#### Objective

- To declare variables in PL/SQL.
- To perform arithmetic calculations on employee salary.
- To calculate a bonus amount based on a percentage of salary.
- To display employee details and salary information before and after applying the bonus.

#### Software Requirements

- Database: Oracle XE or Oracle Live SQL

#### Practical / Experiment Steps

1. Declare variables for employee ID, name, and salary.
2. Calculate a 10% bonus on the employee salary.
3. Calculate the total salary after adding the bonus.
4. Display employee details and salary information before and after bonus.
5. Take screenshots of outputs for documentation.

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### Procedure of the Experiment

1. Start the system and log in.
2. Open Oracle XE or Live SQL.
3. Connect to the database.
4. Declare variables for employee details and bonus calculation.
5. Write the PL/SQL block to calculate bonus and total salary.
6. Execute the PL/SQL block and verify outputs in the console.
7. Take screenshots of the outputs (s1 and s2).

### Input / Output Details

#### Input

- Employee details:
  - emp\_id NUMBER
  - emp\_name VARCHAR2(50)
  - emp\_salary NUMBER
- Bonus calculation: 10% of employee salary

#### Output

- Step 1: Display employee details and original salary.
- Step 2: Display bonus amount and total salary after applying 10% bonus.
- Screenshots of outputs (s1 and s2) are attached.

#### Step 1 Output

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```
DECLARE
    emp_id      NUMBER := 101;
    emp_name    VARCHAR2(50) := 'Jay';
    emp_salary   NUMBER := 222222;
    bonus_amount NUMBER;
    new_salary   NUMBER;

BEGIN
    -- Calculate 10% bonus on employee salary
    bonus_amount := emp_salary * 0.10;

    -- Calculate new salary after adding bonus
    new_salary := emp_salary + bonus_amount;

    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);

    DBMS_OUTPUT.PUT_LINE(CHR(10) || 'Salary Details');
    DBMS_OUTPUT.PUT_LINE('-----');
    DBMS_OUTPUT.PUT_LINE('Salary Before Bonus : ' || emp_salary);
    DBMS_OUTPUT.PUT_LINE('10% Bonus Amount : ' || bonus_amount);
    DBMS_OUTPUT.PUT_LINE('Salary After Bonus : ' || new_salary);

END;
```

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### Result

Employee Details

Employee ID : 101  
Employee Name : Jay



Salary Details

Salary Before Bonus : 222222  
10% Bonus Amount : 22222.2  
Salary After Bonus : 244444.2

PL/SQL procedure successfully completed.

Elapsed: 00:00:00.003

### Employee Details

Employee ID : 101  
Employee Name : Jay  
Salary Before Bonus : 222222

### Step 2 Output

Screenshot: Step 2 – Salary After Bonus

### Salary Details

Salary Before Bonus : 222222  
10% Bonus Amount : 22222.2  
Salary After Bonus : 244444.2

### Learning Outcome

After completing this experiment, the student will be able to:

- Declare and use variables in PL/SQL.
- Perform arithmetic operations for salary calculations.
- Calculate bonuses based on a percentage of salary.

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- Display structured outputs using DBMS\_OUTPUT.PUT\_LINE.
- Understand the workflow of PL/SQL blocks for practical data operations.