

ASSIGNMENTS ON ORACLE PL/SQL PROGRAMMING

Assignment-1: Calculate Simple Interest

Objective: Use variables and arithmetic expressions inside a PL/SQL block.

Requirements:

1. Declare three variables:

- p (principal)
- r (rate of interest)
- t (time in years)

2. Compute Simple Interest using:

$$SI = (p * r * t) / 100$$

3. Display the result using DBMS_OUTPUT.PUT_LINE.

Assignment 2: Employee Bonus Calculation

Objective: Practice variable declaration and IF conditions.

Requirements:

1. Declare variables:

- emp_name VARCHAR2(50)
- salary NUMBER
- bonus NUMBER

2. Assign values to emp_name and salary.

3. Use conditions:

- If salary > 50000 → bonus = 0.10 × salary
- Else → bonus = 0.15 × salary

4. Display employee name, salary, and bonus.

Assignment-3: Retrieve and Display Department Details

Objective: Use %ROWTYPE with a WHERE clause.

Requirements:

1. Declare a variable v_dept of type DEPARTMENTS%ROWTYPE.
 2. Take a sample department ID in variable
 3. Fetch the corresponding record into v_dept.
 4. Display department name and location
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Assignment 4: Student Marks Management

Create a PL/SQL block using an **associative array indexed by VARCHAR2** to store students' marks and calculate their average score.

Requirements:

1. Use an associative array where:
 - o Key → Student Name
 - o Value → Marks (NUMBER)
2. Insert marks for at least 5 students.
3. Display all student names with their marks.
4. Calculate and print:
 - o Total marks
 - o Average marks

Hint: Use .FIRST, .NEXT for iteration.

Assignment 5: Country–Capital Lookup

Objective: Use an associative array indexed by VARCHAR2 to perform lookups.

Requirements:

1. Declare an associative array with:
 - o Key → Country Name
 - o Value → Capital City
2. Insert at least 6 country–capital pairs.
3. Ask the user for a **country name** (using &country substitution variable).

4. Display:

- The capital if the country exists.
- A message “Country not found” otherwise.

Hint: Use EXISTS(key) to check if the element is in the associative array.
