

Exercise 1: Control Structures (PL/SQL)

Scenario 1: Discount for Senior Citizens

Question: Write a PL/SQL block that loops through all customers, checks their age, and if they are above 60, apply a 1% discount to their current loan interest rates.

PL/SQL Code:

```
-- Assume we have table Customers(id, name, age, loan_interest)
DECLARE
    CURSOR cur_customers IS
        SELECT id, age, loan_interest FROM Customers;

    v_id Customers.id%TYPE;
    v_age Customers.age%TYPE;
    v_interest Customers.loan_interest%TYPE;
BEGIN
    FOR rec IN cur_customers LOOP
        IF rec.age > 60 THEN
            UPDATE Customers
            SET loan_interest = loan_interest - 1
            WHERE id = rec.id;
        END IF;
    END LOOP;

    DBMS_OUTPUT.PUT_LINE('Discount applied to senior customers');
END;
/
```

Expected Output: (Since we dont have actual tables)

Discount applied to senior customer

Scenario 2: Promote Customers to VIP

Question: Write a PL/SQL block that iterates through all customers and sets a flag IsVIP to TRUE for those with a balance over \$10,000.

PL/SQL Code:

```
-- Assume table Customers(id, balance, IsVIP)
BEGIN
  FOR cust IN (SELECT id, balance FROM Customers) LOOP
    IF cust.balance > 10000 THEN
      UPDATE Customers
      SET IsVIP = 'TRUE'
      WHERE id = cust.id;
    END IF;
  END LOOP;

  DBMS_OUTPUT.PUT_LINE('VIP status updated for eligible customers');
END;
/
```

Expected Output:

VIP status updated for eligible customers

Scenario 3: Loan Due Reminders

Question: Write a PL/SQL block that fetches all loans due in the next 30 days and prints a reminder message for each customer.

PL/SQL Code:

```
-- Assume table Loans(id, customer_id, due_date)
-- Assume table Customers(id, name)

DECLARE
    CURSOR cur_loans IS
        SELECT L.customer_id, C.name, L.due_date
        FROM Loans L
        JOIN Customers C ON L.customer_id = C.id
        WHERE L.due_date <= SYSDATE + 30;

BEGIN
    FOR loan IN cur_loans LOOP
        DBMS_OUTPUT.PUT_LINE('Reminder: ' || loan.name || ' your loan is due
on ' || loan.due_date);
    END LOOP;
END;
/
```

Expected Output Example:

Reminder: Ramesh your loan is due on 20-JUL-25
Reminder: Sunita your loan is due on 15-JUL-25