**WEEK-2:**

**Exercise 1: Control Structures**

**Scenario 1:** The bank wants to apply a discount to loan interest rates for customers above 60 years old.

* + **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.

**Scenario 2:** A customer can be promoted to VIP status based on their balance.

* + **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.

**Scenario 3:** The bank wants to send reminders to customers whose loans are due within the next 30 days.

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

-- Create tables and insert sample data

CREATE TABLE customers (

    customer\_id NUMBER PRIMARY KEY,

    age NUMBER,

    interest\_rate NUMBER,

    balance NUMBER,

    IsVIP VARCHAR2(5)

);

INSERT INTO customers VALUES (1, 65, 10, 5000, 'FALSE');

INSERT INTO customers VALUES (2, 45, 12, 15000, 'FALSE');

INSERT INTO customers VALUES (3, 70, 9, 8000, 'FALSE');

COMMIT;

CREATE TABLE loans (

    loan\_id NUMBER PRIMARY KEY,

    customer\_id NUMBER,

    due\_date DATE

);

INSERT INTO loans VALUES (1, 1, SYSDATE + 10);

INSERT INTO loans VALUES (2, 2, SYSDATE + 25);

INSERT INTO loans VALUES (3, 3, SYSDATE + 40);

COMMIT;

SELECT \* FROM customers;

SELECT \* FROM loans;

-- Scenario 1: Apply 1% discount to loan interest rates for customers above 60

BEGIN

    FOR rec IN (SELECT customer\_id, age, interest\_rate FROM customers) LOOP

        IF rec.age > 60 THEN

            UPDATE customers

            SET interest\_rate = interest\_rate - (interest\_rate \* 0.01)

            WHERE customer\_id = rec.customer\_id;

        END IF;

    END LOOP;

    COMMIT;

END;

/

SELECT \* FROM customers;

-- Scenario 2: Promote customers to VIP status based on balance

BEGIN

    FOR rec IN (SELECT customer\_id, balance FROM customers) LOOP

        IF rec.balance > 10000 THEN

            UPDATE customers

            SET IsVIP = 'TRUE'

            WHERE customer\_id = rec.customer\_id;

        END IF;

    END LOOP;

    COMMIT;

END;

/

SELECT \* FROM customers;

-- Scenario 3: Send reminders for loans due within 30 days

DECLARE

    CURSOR due\_loans IS

        SELECT customer\_id, due\_date FROM loans

        WHERE due\_date <= SYSDATE + 30;

BEGIN

    FOR rec IN due\_loans LOOP

        DBMS\_OUTPUT.PUT\_LINE('Reminder: Loan for customer ' || rec.customer\_id || ' is due on ' || TO\_CHAR(rec.due\_date, 'YYYY-MM-DD'));

    END LOOP;

END;

/

SELECT \* FROM loans;





