**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.

BEGIN

FOR customer IN (SELECT CustomerID, DOB FROM Customers) LOOP

IF EXTRACT(YEAR FROM SYSDATE) - EXTRACT(YEAR FROM customer.DOB) > 60 THEN

UPDATE Loans

SET InterestRate = InterestRate - 1

WHERE CustomerID = customer.CustomerID;

END IF;

END LOOP;

END;

**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.

BEGIN

FOR customer IN (SELECT CustomerID, Balance FROM Customers) LOOP

IF customer.Balance > 10000 THEN

UPDATE Customers

SET IsVIP = TRUE

WHERE CustomerID = customer.CustomerID;

END IF;

END LOOP;

END;

**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.

BEGIN

FOR loan IN (SELECT LoanID, CustomerID, EndDate FROM Loans WHERE EndDate BETWEEN SYSDATE AND SYSDATE + 30) LOOP

DBMS\_OUTPUT.PUT\_LINE('Reminder: Loan ID ' || loan.LoanID || ' for customer ID ' || loan.CustomerID || ' is due on ' || TO\_CHAR(loan.EndDate, 'YYYY-MM-DD'));

END LOOP;

END;