**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 rec IN (SELECT CustomerID, InterestRate FROM Loans l JOIN Customers c ON l.CustomerID = c.CustomerID WHERE EXTRACT(YEAR FROM SYSDATE) - EXTRACT(YEAR FROM c.DOB) > 60)

LOOP

UPDATE Loans

SET InterestRate = rec.InterestRate - 1

WHERE CustomerID = rec.CustomerID;

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 rec IN (SELECT CustomerID FROM Customers WHERE Balance > 10000)

LOOP

UPDATE Customers

SET IsVIP = TRUE

WHERE CustomerID = rec.CustomerID;

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 rec IN (SELECT c.Name, l.LoanID, l.EndDate FROM Loans l JOIN Customers c ON l.CustomerID = c.CustomerID WHERE l.EndDate BETWEEN SYSDATE AND SYSDATE + 30)

LOOP

DBMS\_OUTPUT.PUT\_LINE('Reminder: Loan ' || rec.LoanID || ' for ' || rec.Name || ' is due on ' || rec.EndDate);

END LOOP;

END;