**Exercise 1: Control Structures**

Scenario 1: Apply discount to loan interest rates for customers above 60 years old

Query:

DECLARE

v\_customer\_id NUMBER;

v\_loan\_id NUMBER;

v\_interest\_rate NUMBER;

v\_age NUMBER;

BEGIN

FOR cur\_customer IN (SELECT CustomerID, TRUNC(MONTHS\_BETWEEN(SYSDATE, DOB) / 12) AS age FROM Customers)

LOOP

v\_customer\_id := cur\_customer.CustomerID;

v\_age := cur\_customer.age;

IF v\_age > 60 THEN

FOR cur\_loan IN (SELECT LoanID, InterestRate

FROM Loans

WHERE CustomerID = v\_customer\_id)

LOOP

v\_loan\_id := cur\_loan.LoanID;

v\_interest\_rate := cur\_loan.InterestRate;

UPDATE Loans

SET InterestRate = v\_interest\_rate - 1

WHERE LoanID = v\_loan\_id;

END LOOP;

END IF;

END LOOP;

END;

**Scenario 2: Promote customers to VIP status based on their balance**

Query:

DECLARE

v\_customer\_id NUMBER;

v\_balance NUMBER;

BEGIN

FOR cur\_customer IN (SELECT CustomerID, Balance

FROM Customers)

LOOP

v\_customer\_id := cur\_customer.CustomerID;

v\_balance := cur\_customer.Balance;

IF v\_balance > 10000 THEN

UPDATE Customers

SET IsVIP = TRUE

WHERE CustomerID = v\_customer\_id;

END IF;

END LOOP;

END;

**Scenario 3: Send reminders to customers whose loans are due within the next 30 days**

Query:

DECLARE

v\_loan\_id NUMBER;

v\_customer\_id NUMBER;

v\_end\_date DATE;

BEGIN

FOR cur\_loan IN (SELECT LoanID, CustomerID, EndDate

FROM Loans

WHERE EndDate <= SYSDATE + 30)

LOOP

v\_loan\_id := cur\_loan.LoanID;

v\_customer\_id := cur\_loan.CustomerID;

v\_end\_date := cur\_loan.EndDate;

DBMS\_OUTPUT.PUT\_LINE('Reminder: Loan ' || v\_loan\_id || ' for customer ' || v\_customer\_id || ' is due on ' || v\_end\_date);

END LOOP;

END;