**Exercise 6: Cursors**

**Scenario 1: Generate Monthly Statements for All Customers**

DECLARE

CURSOR GenerateMonthlyStatements IS

SELECT c.CustomerID, c.Name, t.TransactionDate, t.Amount, t.TransactionType

FROM Customers c

JOIN Accounts a ON c.CustomerID = a.CustomerID

JOIN Transactions t ON a.AccountID = t.AccountID

WHERE t.TransactionDate BETWEEN TRUNC(SYSDATE, 'MM') AND SYSDATE;

BEGIN

FOR rec IN GenerateMonthlyStatements LOOP

DBMS\_OUTPUT.PUT\_LINE('Customer: ' || rec.Name || ' (ID: ' || rec.CustomerID || ')');

DBMS\_OUTPUT.PUT\_LINE('Date: ' || rec.TransactionDate || ' - Type: ' || rec.TransactionType || ' - Amount: ' || rec.Amount);

END LOOP;

END;

**Scenario 2: Apply Annual Fee to All Accounts**

DECLARE

CURSOR ApplyAnnualFee IS

SELECT AccountID, Balance FROM Accounts;

v\_annual\_fee NUMBER := 50; -- Assume the annual fee is 50

BEGIN

FOR rec IN ApplyAnnualFee LOOP

UPDATE Accounts

SET Balance = Balance - v\_annual\_fee

WHERE AccountID = rec.AccountID;

DBMS\_OUTPUT.PUT\_LINE('Account ID: ' || rec.AccountID || ' - Fee Applied: ' || v\_annual\_fee);

END LOOP;

COMMIT;

END;

**Scenario 3: Update Loan Interest Rates**

DECLARE

CURSOR UpdateLoanInterestRates IS

SELECT LoanID, InterestRate FROM Loans;

v\_new\_interest\_rate NUMBER;

BEGIN

FOR rec IN UpdateLoanInterestRates LOOP

-- Example policy: Increase all interest rates by 0.5%

v\_new\_interest\_rate := rec.InterestRate + 0.5;

UPDATE Loans

SET InterestRate = v\_new\_interest\_rate

WHERE LoanID = rec.LoanID;

DBMS\_OUTPUT.PUT\_LINE('Loan ID: ' || rec.LoanID || ' - New Interest Rate: ' || v\_new\_interest\_rate);

END LOOP;

COMMIT;

END;