Exercise 6: Cursors

# Scenario 1: Generate monthly statements for all customers.

## Question: Write a PL/SQL block using an explicit cursor GenerateMonthlyStatements that retrieves all transactions for the current month and prints a statement for each customer.

DECLARE

CURSOR cur\_statements IS

SELECT CustomerID, TransactionDate, Amount, TransactionType

FROM Transactions

WHERE TransactionDate BETWEEN TRUNC(SYSDATE, 'MM') AND LAST\_DAY(SYSDATE);

BEGIN

FOR rec IN cur\_statements LOOP

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

', Date: ' || rec.TransactionDate ||

', Amount: ' || rec.Amount ||

', Type: ' || rec.TransactionType);

END LOOP;

END;

# Scenario 2: Apply annual fee to all accounts.

## Question: Write a PL/SQL block using an explicit cursor ApplyAnnualFee that deducts an annual maintenance fee from the balance of all accounts.

DECLARE

CURSOR cur\_fees IS

SELECT AccountID, Balance FROM Accounts;

v\_fee CONSTANT NUMBER := 100; -- Annual fee amount

BEGIN

FOR rec IN cur\_fees LOOP

UPDATE Accounts

SET Balance = Balance - v\_fee

WHERE AccountID = rec.AccountID;

END LOOP;

COMMIT;

END;

# Scenario 3: Update the interest rate for all loans based on a new policy.

## Question: Write a PL/SQL block using an explicit cursor UpdateLoanInterestRates that fetches all loans and updates their interest rates based on the new policy.

DECLARE

CURSOR cur\_loans IS

SELECT LoanID, InterestRate FROM Loans;

v\_new\_rate CONSTANT NUMBER := 6; -- New interest rate

BEGIN

FOR rec IN cur\_loans LOOP

UPDATE Loans

SET InterestRate = v\_new\_rate

WHERE LoanID = rec.LoanID;

END LOOP;

COMMIT;

END;