**Exercise 6: Cursors**

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

SET SERVEROUTPUT ON;

DECLARE

CURSOR transaction\_cursor IS

SELECT t.TransactionID, t.AccountID, t.Amount, t.TransactionType, t.TransactionDate, c.Name

FROM Transactions t

JOIN Accounts a ON t.AccountID = a.AccountID

JOIN Customers c ON a.CustomerID = c.CustomerID

WHERE EXTRACT(MONTH FROM t.TransactionDate) = EXTRACT(MONTH FROM SYSDATE)

AND EXTRACT(YEAR FROM t.TransactionDate) = EXTRACT(YEAR FROM SYSDATE);

BEGIN

FOR txn\_rec IN transaction\_cursor LOOP

DBMS\_OUTPUT.PUT\_LINE('Customer: ' || txn\_rec.Name ||

', Account ID: ' || txn\_rec.AccountID ||

', Transaction Type: ' || txn\_rec.TransactionType ||

', Amount: ' || txn\_rec.Amount ||

', Date: ' || TO\_CHAR(txn\_rec.TransactionDate, 'DD-MON-YYYY'));

END LOOP;

END;

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

SET SERVEROUTPUT ON;

DECLARE

CURSOR account\_cursor IS

SELECT AccountID, Balance FROM Accounts;

v\_fee CONSTANT NUMBER := 100; -- Example annual fee

BEGIN

FOR acc\_rec IN account\_cursor LOOP

UPDATE Accounts

SET Balance = Balance - v\_fee

WHERE AccountID = acc\_rec.AccountID;

DBMS\_OUTPUT.PUT\_LINE('Annual fee of ' || v\_fee || ' deducted from Account ID: ' || acc\_rec.AccountID);

END LOOP;

COMMIT;

END;

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**Scenario 3: Update Loan Interest Rates Based on New Policy**

SET SERVEROUTPUT ON;

DECLARE

CURSOR loan\_cursor IS

SELECT LoanID, InterestRate FROM Loans;

v\_increment CONSTANT NUMBER := 0.5;

BEGIN

FOR loan\_rec IN loan\_cursor LOOP

UPDATE Loans

SET InterestRate = loan\_rec.InterestRate + v\_increment

WHERE LoanID = loan\_rec.LoanID;

DBMS\_OUTPUT.PUT\_LINE('Loan ID: ' || loan\_rec.LoanID ||

' - Old Interest Rate: ' || loan\_rec.InterestRate ||

', New Interest Rate: ' || (loan\_rec.InterestRate + v\_increment));

END LOOP;

COMMIT;

END;

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