**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.

**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.

**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.

**Solution:**

**Scenario 1: Generate Monthly Statements**

DECLARE

CURSOR trans\_cursor IS

SELECT CustomerID, TransactionDate, Amount, TransactionType

FROM Transactions

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

BEGIN

FOR rec IN trans\_cursor LOOP

DBMS\_OUTPUT.PUT\_LINE('Customer ' || rec.CustomerID || ': ' || rec.TransactionDate || ', ' || rec.Amount || ', ' || rec.TransactionType);

END LOOP;

END;

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**Scenario 2: Apply Annual Fee**

DECLARE

CURSOR acc\_cursor IS

SELECT AccountID, Balance

FROM Accounts;

v\_fee NUMBER := 50;

BEGIN

FOR rec IN acc\_cursor LOOP

UPDATE Accounts

SET Balance = Balance - v\_fee

WHERE AccountID = rec.AccountID;

END LOOP;

END;

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**Scenario 3: Update Loan Interest Rates**

DECLARE

CURSOR loan\_cursor IS

SELECT LoanID, InterestRate

FROM Loans;

v\_new\_rate NUMBER := 5;

BEGIN

FOR rec IN loan\_cursor LOOP

UPDATE Loans

SET InterestRate = v\_new\_rate

WHERE LoanID = rec.LoanID;

END LOOP;

END;

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