**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.

**CODE:**

DECLARE

CURSOR cur IS

SELECT t.AccountID, t.Amount, t.TransactionType FROM Transactions t WHERE TO\_CHAR(t.TransactionDate, 'MMYYYY') = TO\_CHAR(SYSDATE, 'MMYYYY');

BEGIN

FOR rec IN cur LOOP

DBMS\_OUTPUT.PUT\_LINE('Account: ' || rec.AccountID || ', ' || rec.TransactionType || ' of ' || rec.Amount);

END LOOP;

END;

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**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.

**CODE:**

DECLARE

CURSOR cur IS SELECT AccountID, Balance FROM Accounts FOR UPDATE OF Balance;

BEGIN

FOR rec IN cur LOOP

UPDATE Accounts SET Balance = Balance - 100

WHERE CURRENT OF cur;

DBMS\_OUTPUT.PUT\_LINE('Deducted 100 from AccountID: ' || rec.AccountID ||

', New Balance: ' || (rec.Balance - 100));

END LOOP;

COMMIT;

END;

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**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.

**CODE:**

DECLARE

CURSOR cur IS SELECT LoanID, InterestRate FROM Loans;

BEGIN

FOR rec IN cur LOOP

UPDATE Loans SET InterestRate = rec.InterestRate + 0.5 WHERE LoanID = rec.LoanID;

END LOOP;

COMMIT;

END;

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