**Exercise 6: Cursors**

**Scenario 1:**

DECLARE

CURSOR cur\_customers IS

SELECT CustomerID, Name FROM Customers;

CURSOR cur\_transactions(p\_custID NUMBER) IS

SELECT t.TransactionDate, t.Amount, t.TransactionType

FROM Transactions t

JOIN Accounts a ON t.AccountID = a.AccountID

WHERE a.CustomerID = p\_custID

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

v\_name Customers.Name%TYPE;

BEGIN

FOR cust\_rec IN cur\_customers LOOP

DBMS\_OUTPUT.PUT\_LINE('--- Statement for ' || cust\_rec.Name || ' ---');

FOR txn\_rec IN cur\_transactions(cust\_rec.CustomerID) LOOP

DBMS\_OUTPUT.PUT\_LINE(

TO\_CHAR(txn\_rec.TransactionDate, 'YYYY-MM-DD') || ' - ' ||

txn\_rec.TransactionType || ' - $' || txn\_rec.Amount

);

END LOOP;

DBMS\_OUTPUT.PUT\_LINE('-----------------------------');

END LOOP;

END;

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**Scenario 2:**

DECLARE

CURSOR cur\_accounts IS

SELECT AccountID, Balance FROM Accounts FOR UPDATE;

v\_fee NUMBER := 100; -- Flat annual fee

BEGIN

FOR acc\_rec IN cur\_accounts LOOP

UPDATE Accounts

SET Balance = Balance - v\_fee,

LastModified = SYSDATE

WHERE AccountID = acc\_rec.AccountID;

END LOOP;

COMMIT;

DBMS\_OUTPUT.PUT\_LINE('Annual fee applied to all accounts.');

END;

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**Scenario 3:**

DECLARE

CURSOR cur\_loans IS

SELECT LoanID, LoanAmount, InterestRate FROM Loans FOR UPDATE;

v\_newRate NUMBER;

BEGIN

FOR loan\_rec IN cur\_loans LOOP

IF loan\_rec.LoanAmount > 10000 THEN

v\_newRate := loan\_rec.InterestRate - 0.5;

ELSE

v\_newRate := loan\_rec.InterestRate - 0.25;

END IF;

UPDATE Loans

SET InterestRate = v\_newRate

WHERE LoanID = loan\_rec.LoanID;

END LOOP;

COMMIT;

DBMS\_OUTPUT.PUT\_LINE('Loan interest rates updated as per policy.');

END;

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