Cursors

-- Scenario 1

DECLARE

CURSOR txn\_cur IS

SELECT

T.TransactionID,

T.AccountID,

C.CustomerID,

CU.Name,

T.TransactionDate,

T.Amount,

T.TransactionType

FROM Transactions T

JOIN Accounts C ON T.AccountID = C.AccountID

JOIN Customers CU ON C.CustomerID = CU.CustomerID

WHERE TO\_CHAR(T.TransactionDate, 'YYYY-MM') = TO\_CHAR(SYSDATE, 'YYYY-MM')

ORDER BY CU.CustomerID;

v\_txn txn\_cur%ROWTYPE;

BEGIN

OPEN txn\_cur;

LOOP

FETCH txn\_cur INTO v\_txn;

EXIT WHEN txn\_cur%NOTFOUND;

DBMS\_OUTPUT.PUT\_LINE(

'Customer: ' || v\_txn.Name ||

' | Account: ' || v\_txn.AccountID ||

' | Date: ' || TO\_CHAR(v\_txn.TransactionDate, 'DD-MON-YYYY') ||

' | Type: ' || v\_txn.TransactionType ||

' | Amount: ' || v\_txn.Amount

);

END LOOP;

CLOSE txn\_cur;

END;

/

SET SERVEROUTPUT ON;

-- Scenario 2

DECLARE

CURSOR acc\_cur IS

SELECT AccountID, Balance

FROM Accounts;

v\_acc acc\_cur%ROWTYPE;

v\_fee CONSTANT NUMBER := 500;

BEGIN

OPEN acc\_cur;

LOOP

FETCH acc\_cur INTO v\_acc;

EXIT WHEN acc\_cur%NOTFOUND;

IF v\_acc.Balance >= v\_fee THEN

UPDATE Accounts

SET Balance = Balance - v\_fee,

LastModified = SYSDATE

WHERE AccountID = v\_acc.AccountID;

DBMS\_OUTPUT.PUT\_LINE('₹' || v\_fee || ' fee deducted from Account ID: ' || v\_acc.AccountID);

ELSE

DBMS\_OUTPUT.PUT\_LINE('Skipped Account ID: ' || v\_acc.AccountID || ' (Insufficient balance)');

END IF;

END LOOP;

CLOSE acc\_cur;

COMMIT;

END;

/

-- Scenario 3

DECLARE

CURSOR loan\_cur IS

SELECT LoanID, LoanAmount, InterestRate

FROM Loans;

v\_loan loan\_cur%ROWTYPE;

BEGIN

OPEN loan\_cur;

LOOP

FETCH loan\_cur INTO v\_loan;

EXIT WHEN loan\_cur%NOTFOUND;

IF v\_loan.LoanAmount > 10000 THEN

UPDATE Loans

SET InterestRate = InterestRate + 0.5

WHERE LoanID = v\_loan.LoanID;

DBMS\_OUTPUT.PUT\_LINE('Loan ID ' || v\_loan.LoanID ||

' updated: +0.5% (High amount)');

ELSE

UPDATE Loans

SET InterestRate = InterestRate - 0.25

WHERE LoanID = v\_loan.LoanID;

DBMS\_OUTPUT.PUT\_LINE('Loan ID ' || v\_loan.LoanID ||

' updated: -0.25% (Low amount)');

END IF;

END LOOP;

CLOSE loan\_cur;

COMMIT;

END;

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