**Exercise - 6  
  
Scenario 1:** Generate monthly statements for all customers.  
  
DECLARE

CURSOR customer\_cursor IS

SELECT DISTINCT CustomerID

FROM Transactions

WHERE MONTH(TransactionDate) = MONTH(SYSDATE)

AND YEAR(TransactionDate) = YEAR(SYSDATE);

v\_customerID Customers.CustomerID%TYPE;

v\_transactionDate Transactions.TransactionDate%TYPE;

v\_amount Transactions.Amount%TYPE;

v\_transactionType Transactions.TransactionType%TYPE;

BEGIN

OPEN customer\_cursor;

LOOP

FETCH customer\_cursor INTO v\_customerID;

EXIT WHEN customer\_cursor%NOTFOUND;

-- Print the statement header

DBMS\_OUTPUT.PUT\_LINE('Statement for Customer ID: ' || v\_customerID);

DBMS\_OUTPUT.PUT\_LINE('Date\t\t\tAmount\tType');

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

FOR trans IN (SELECT TransactionDate, Amount, TransactionType

FROM Transactions

WHERE CustomerID = v\_customerID

AND MONTH(TransactionDate) = MONTH(SYSDATE)

AND YEAR(TransactionDate) = YEAR(SYSDATE)) LOOP

DBMS\_OUTPUT.PUT\_LINE(trans.TransactionDate || '\t' || trans.Amount || '\t' || trans.TransactionType);

END LOOP;

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

END LOOP;

CLOSE customer\_cursor;

END;

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

DECLARE

CURSOR account\_cursor IS

SELECT AccountID, Balance

FROM Accounts;

v\_accountID Accounts.AccountID%TYPE;

v\_balance Accounts.Balance%TYPE;

v\_annualFee DECIMAL(10, 2) := 50.00; -- Example annual fee

BEGIN

OPEN account\_cursor;

LOOP

FETCH account\_cursor INTO v\_accountID, v\_balance;

EXIT WHEN account\_cursor%NOTFOUND;

-- Deduct annual fee from balance

UPDATE Accounts

SET Balance = v\_balance - v\_annualFee

WHERE AccountID = v\_accountID;

-- Optionally, print the result

DBMS\_OUTPUT.PUT\_LINE('Account ID: ' || v\_accountID || ' - New Balance: ' || (v\_balance - v\_annualFee));

END LOOP;

CLOSE account\_cursor;

END;

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**Scenario 3:** Update the interest rate for all loans based on a new policy.  
  
DECLARE

CURSOR loan\_cursor IS

SELECT LoanID, InterestRate

FROM Loans;

v\_loanID Loans.LoanID%TYPE;

v\_oldInterestRate Loans.InterestRate%TYPE;

v\_newInterestRate DECIMAL(5, 2); -- Example new interest rate based on policy

BEGIN

OPEN loan\_cursor;

LOOP

FETCH loan\_cursor INTO v\_loanID, v\_oldInterestRate;

EXIT WHEN loan\_cursor%NOTFOUND;

-- Compute the new interest rate based on the policy

v\_newInterestRate := v\_oldInterestRate + 0.5; -- Example: increase by 0.5%

-- Update the interest rate

UPDATE Loans

SET InterestRate = v\_newInterestRate

WHERE LoanID = v\_loanID;

-- Optionally, print the result

DBMS\_OUTPUT.PUT\_LINE('Loan ID: ' || v\_loanID || ' - Old Rate: ' || v\_oldInterestRate || ' - New Rate: ' || v\_newInterestRate);

END LOOP;

CLOSE loan\_cursor;

END;

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