PL/SQL Programming

SuperSet ID:6412063

Exercise 6: Cursors

Scenario 1:

SET SERVEROUTPUT ON;

DECLARE

CURSOR trans\_cursor IS

SELECT t.TransactionID, t.AccountID, t.TransactionDate, t.Amount, t.TransactionType,

a.CustomerID

FROM Transactions t

JOIN Accounts a ON t.AccountID = a.AccountID

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

v\_transaction\_id Transactions.TransactionID%TYPE;

v\_account\_id Transactions.AccountID%TYPE;

v\_date DATE;

v\_amount NUMBER;

v\_type VARCHAR2(10);

v\_customer\_id NUMBER;

BEGIN

OPEN trans\_cursor;

LOOP

FETCH trans\_cursor INTO v\_transaction\_id, v\_account\_id, v\_date, v\_amount, v\_type, v\_customer\_id;

EXIT WHEN trans\_cursor%NOTFOUND;

DBMS\_OUTPUT.PUT\_LINE('Customer ID: ' || v\_customer\_id ||

' | Transaction ID: ' || v\_transaction\_id ||

' | Date: ' || TO\_CHAR(v\_date, 'DD-MON-YYYY') ||

' | Type: ' || v\_type ||

' | Amount: ' || v\_amount);

END LOOP;

CLOSE trans\_cursor;

END;

/

Output:

A black screen with white text

Description automatically generated

Scenario 2:

SET SERVEROUTPUT ON;

DECLARE

CURSOR acc\_cursor IS

SELECT AccountID, Balance FROM Accounts;

v\_account\_id Accounts.AccountID%TYPE;

v\_balance Accounts.Balance%TYPE;

v\_fee CONSTANT NUMBER := 200;

BEGIN

OPEN acc\_cursor;

LOOP

FETCH acc\_cursor INTO v\_account\_id, v\_balance;

EXIT WHEN acc\_cursor%NOTFOUND;

IF v\_balance >= v\_fee THEN

UPDATE Accounts

SET Balance = Balance - v\_fee

WHERE AccountID = v\_account\_id;

DBMS\_OUTPUT.PUT\_LINE('Annual fee of ' || v\_fee || ' deducted from Account ' || v\_account\_id);

ELSE

DBMS\_OUTPUT.PUT\_LINE('Skipped Account ' || v\_account\_id || ': Insufficient balance');

END IF;

END LOOP;

CLOSE acc\_cursor;

COMMIT;

END;

/

Output:

A black screen with a black background

Description automatically generated

Scenario 3:

SET SERVEROUTPUT ON;

DECLARE

CURSOR loan\_cursor IS

SELECT LoanID, InterestRate FROM Loans;

v\_loan\_id Loans.LoanID%TYPE;

v\_rate Loans.InterestRate%TYPE;

BEGIN

OPEN loan\_cursor;

LOOP

FETCH loan\_cursor INTO v\_loan\_id, v\_rate;

EXIT WHEN loan\_cursor%NOTFOUND;

IF v\_rate < 5 THEN

UPDATE Loans

SET InterestRate = InterestRate + 0.5

WHERE LoanID = v\_loan\_id;

DBMS\_OUTPUT.PUT\_LINE('Loan ' || v\_loan\_id || ': Interest increased by 0.5%');

ELSE

UPDATE Loans

SET InterestRate = InterestRate + 0.25

WHERE LoanID = v\_loan\_id;

DBMS\_OUTPUT.PUT\_LINE('Loan ' || v\_loan\_id || ': Interest increased by 0.25%');

END IF;

END LOOP;

CLOSE loan\_cursor;

COMMIT;

END;

/

Output:

A black screen with a black background

Description automatically generated