**Question – 1**

Scenario 1: Generate monthly statements for all customers.

o 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.

PL/SQL Code –

SET SERVEROUT ON;

DECLARE

CURSOR GenerateMonthlyStatements IS

SELECT a.CUSTOMERID, t.ACCOUNTID, t.TRANSACTIONDATE, t.AMOUNT, t.TRANSACTIONTYPE

FROM TRANSACTIONS t

JOIN ACCOUNTS a ON t.ACCOUNTID = a.ACCOUNTID

WHERE TO\_CHAR(t.TRANSACTIONDATE, 'YYYY-MM') = TO\_CHAR(SYSDATE, 'YYYY-MM')

ORDER BY a.CUSTOMERID, t.TRANSACTIONDATE;

v\_customer\_id ACCOUNTS.CUSTOMERID%TYPE;

v\_account\_id TRANSACTIONS.ACCOUNTID%TYPE;

v\_transaction\_date TRANSACTIONS.TRANSACTIONDATE%TYPE;

v\_amount TRANSACTIONS.AMOUNT%TYPE;

v\_transaction\_type TRANSACTIONS.TRANSACTIONTYPE%TYPE;

v\_current\_customer\_id ACCOUNTS.CUSTOMERID%TYPE := NULL;

v\_total\_amount NUMBER := 0;

BEGIN

OPEN GenerateMonthlyStatements;

LOOP

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

EXIT WHEN GenerateMonthlyStatements%NOTFOUND;

-- Check if the data is processing a new customer

IF v\_current\_customer\_id IS NULL OR v\_current\_customer\_id != v\_customer\_id THEN

-- Print the statement for the previous customer, if any

IF v\_current\_customer\_id IS NOT NULL THEN

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

DBMS\_OUTPUT.PUT\_LINE('Total Amount: ' || v\_total\_amount);

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

END IF;

-- Reset totals for the new customer

v\_current\_customer\_id := v\_customer\_id;

v\_total\_amount := 0;

END IF;

-- Print each transaction

DBMS\_OUTPUT.PUT\_LINE('Account ID: ' || v\_account\_id ||

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

', Amount: ' || v\_amount ||

', Type: ' || v\_transaction\_type);

v\_total\_amount := v\_total\_amount + v\_amount;

END LOOP;

-- Print the statement

IF v\_current\_customer\_id IS NOT NULL THEN

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

DBMS\_OUTPUT.PUT\_LINE('Total Amount: ' || v\_total\_amount);

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

END IF;

CLOSE GenerateMonthlyStatements;

END;

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