**Exercise 6: Cursors**

**Scenario 1:** Generate monthly statements for all customers.

**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.

**Code:**

SET SERVEROUTPUT ON;

BEGIN

  -- Insert a new transaction

  INSERT INTO Transactions VALUES (40, 101, SYSDATE, 1000, 'CREDIT');

  IF SQL%ROWCOUNT = 1 THEN

    DBMS\_OUTPUT.PUT\_LINE('✅ 1 transaction inserted successfully.');

  ELSE

    DBMS\_OUTPUT.PUT\_LINE('⚠️ No transaction inserted.');

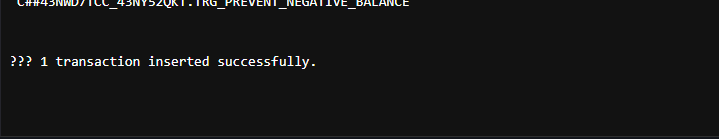
  END IF;

  COMMIT;

END;

/

**Output:**



**Scenario 2:** Apply annual fee to all accounts.

**Question:** Write a PL/SQL block using an explicit cursor **ApplyAnnualFee** that deducts an annual maintenance fee from the balance of all accounts.

**Code:**

SET SERVEROUTPUT ON;

DECLARE

  CURSOR cust\_cursor IS

    SELECT CustomerID, Name, Balance

    FROM Customers;

  v\_id     Customers.CustomerID%TYPE;

  v\_name   Customers.Name%TYPE;

  v\_bal    Customers.Balance%TYPE;

BEGIN

  OPEN cust\_cursor;

  LOOP

    FETCH cust\_cursor INTO v\_id, v\_name, v\_bal;

    EXIT WHEN cust\_cursor%NOTFOUND;

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

                         ', Name: ' || v\_name ||

                         ', Balance: ₹' || v\_bal);

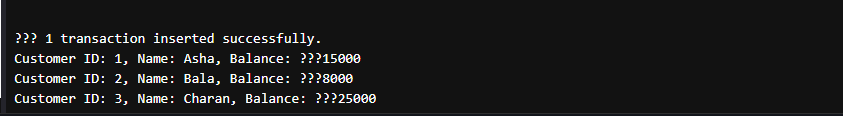
  END LOOP;

  CLOSE cust\_cursor;

END;

/

**Output:**



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

**Question:** Write a PL/SQL block using an explicit cursor **UpdateLoanInterestRates** that fetches all loans and updates their interest rates based on the new policy.

**Code:**

SET SERVEROUTPUT ON;

DECLARE

  CURSOR vip\_cursor IS

    SELECT CustomerID, Name, Balance

    FROM Customers

    WHERE Balance > 10000;

  v\_id     Customers.CustomerID%TYPE;

  v\_name   Customers.Name%TYPE;

  v\_bal    Customers.Balance%TYPE;

BEGIN

  OPEN vip\_cursor;

  LOOP

    FETCH vip\_cursor INTO v\_id, v\_name, v\_bal;

    EXIT WHEN vip\_cursor%NOTFOUND;

    DBMS\_OUTPUT.PUT\_LINE('🔥 VIP Customer → ID: ' || v\_id ||

                         ', Name: ' || v\_name ||

                         ', Balance: ₹' || v\_bal);

  END LOOP;

  CLOSE vip\_cursor;

END;

/

**Output:**

