WEEK-2   
  
EXERCISE 1

SET SERVEROUTPUT ON;

CREATE TABLE Customers (

    CustomerID NUMBER PRIMARY KEY,

    Name VARCHAR2(100),

    DOB DATE,

    Balance NUMBER,

    LastModified DATE,

    IsVIP VARCHAR2(5)

);

CREATE TABLE Accounts (

    AccountID NUMBER PRIMARY KEY,

    CustomerID NUMBER,

    AccountType VARCHAR2(20),

    Balance NUMBER,

    LastModified DATE,

    FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)

);

CREATE TABLE Transactions (

    TransactionID NUMBER PRIMARY KEY,

    AccountID NUMBER,

    TransactionDate DATE,

    Amount NUMBER,

    TransactionType VARCHAR2(10),

    FOREIGN KEY (AccountID) REFERENCES Accounts(AccountID)

);

CREATE TABLE Loans (

    LoanID NUMBER PRIMARY KEY,

    CustomerID NUMBER,

    LoanAmount NUMBER,

    InterestRate NUMBER,

    StartDate DATE,

    EndDate DATE,

    FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)

);

CREATE TABLE Employees (

    EmployeeID NUMBER PRIMARY KEY,

    Name VARCHAR2(100),

    Position VARCHAR2(50),

    Salary NUMBER,

    Department VARCHAR2(50),

    HireDate DATE

);

-- INSERT SAMPLE DATA

INSERT INTO Customers VALUES (1, 'Alice', TO\_DATE('1960-05-10','YYYY-MM-DD'), 15000, SYSDATE, NULL);

INSERT INTO Customers VALUES (2, 'Bob', TO\_DATE('1985-07-20','YYYY-MM-DD'), 9500, SYSDATE, NULL);

INSERT INTO Customers VALUES (3, 'Charlie', TO\_DATE('1950-02-15','YYYY-MM-DD'), 12000, SYSDATE, NULL);

INSERT INTO Loans VALUES (101, 1, 50000, 8.0, SYSDATE - 100, SYSDATE + 10);

INSERT INTO Loans VALUES (102, 2, 30000, 7.5, SYSDATE - 200, SYSDATE + 40);

INSERT INTO Loans VALUES (103, 3, 45000, 9.0, SYSDATE - 300, SYSDATE + 5);

1)

BEGIN

  FOR rec IN (

    SELECT L.LoanID, L.InterestRate, C.CustomerID, C.DOB, C.Name

    FROM Loans L JOIN Customers C ON L.CustomerID = C.CustomerID

  ) LOOP

    DECLARE

      v\_age NUMBER;

    BEGIN

      v\_age := FLOOR(MONTHS\_BETWEEN(SYSDATE, rec.DOB)/12);

      IF v\_age > 60 THEN

        UPDATE Loans

        SET InterestRate = InterestRate - (InterestRate \* 0.01)

        WHERE LoanID = rec.LoanID;

        DBMS\_OUTPUT.PUT\_LINE(' 1% Discount Applied: ' || rec.Name || ' (Age: ' || v\_age || ')');

      END IF;

  END LOOP;

END;

2)

BEGIN

FOR rec IN (SELECT CustomerID, Name, Balance FROM Customers) LOOP

    IF rec.Balance > 10000 THEN

      UPDATE Customers

      SET IsVIP = 'TRUE'

      WHERE CustomerID = rec.CustomerID;

      DBMS\_OUTPUT.PUT\_LINE(' VIP Assigned: ' || rec.Name || ' (Balance: ' || rec.Balance || ')');

    END IF;

  END LOOP;

END;

3)

BEGIN

  FOR rec IN (

    SELECT C.Name, L.LoanID, L.EndDate

    FROM Loans L

    JOIN Customers C ON C.CustomerID = L.CustomerID

    WHERE L.EndDate BETWEEN SYSDATE AND SYSDATE + 30

  ) LOOP

    DBMS\_OUTPUT.PUT\_LINE(' Reminder: Loan ' || rec.LoanID ||

                         ' for ' || rec.Name || ' is due on ' || TO\_CHAR(rec.EndDate, 'DD-MON-YYYY'));

  END LOOP;

END;