**Exercise 1: Control Structures**

CREATE TABLE Customers (

    CustomerID NUMBER PRIMARY KEY,

    Name VARCHAR2(100),

    Age NUMBER,

    Balance NUMBER,

    IsVIP CHAR(1) DEFAULT 'N' -- 'Y' for VIP

);

CREATE TABLE Loans (

    LoanID NUMBER PRIMARY KEY,

    CustomerID NUMBER REFERENCES Customers(CustomerID),

    InterestRate NUMBER(5,2),

    DueDate DATE

);

INSERT INTO Customers VALUES (1, 'John Doe', 65, 12000, 'N');

INSERT INTO Customers VALUES (2, 'Jane Smith', 45, 8000, 'N');

INSERT INTO Customers VALUES (3, 'Elder Joe', 70, 3000, 'N');

INSERT INTO Loans VALUES (101, 1, 7.5, SYSDATE + 10);

INSERT INTO Loans VALUES (102, 2, 8.0, SYSDATE + 40);

INSERT INTO Loans VALUES (103, 3, 6.5, SYSDATE + 5);

COMMIT;

BEGIN

  FOR cust IN (

    SELECT c.CustomerID, l.LoanID, l.InterestRate

    FROM Customers c

    JOIN Loans l ON c.CustomerID = l.CustomerID

    WHERE c.Age > 60

  )

  LOOP

    UPDATE Loans

    SET InterestRate = InterestRate - 1

    WHERE LoanID = cust.LoanID;

  END LOOP;

  COMMIT;

END;

/

BEGIN

  FOR cust IN (SELECT CustomerID FROM Customers WHERE Balance > 10000)

  LOOP

    UPDATE Customers

    SET IsVIP = 'Y'

    WHERE CustomerID = cust.CustomerID;

  END LOOP;

  COMMIT;

END;

/

BEGIN

  FOR loan IN (

    SELECT l.LoanID, c.Name, l.DueDate

    FROM Loans l

    JOIN Customers c ON l.CustomerID = c.CustomerID

    WHERE l.DueDate BETWEEN SYSDATE AND SYSDATE + 30

  )

  LOOP

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

                         ' for customer ' || loan.Name ||

                         ' is due on ' || TO\_CHAR(loan.DueDate, 'DD-MON-YYYY'));

  END LOOP;

END;

/

**Output:**

SELECT \* FROM Customers;

SELECT \* FROM Loans;

A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a computer screen

AI-generated content may be incorrect.