**Exercise 1 – Control Structures**

**Creating the tables:**

CREATE TABLE Customers (

CustomerID NUMBER PRIMARY KEY,

Name VARCHAR2(100),

Age NUMBER,

Balance NUMBER,

IsVIP VARCHAR2(3) DEFAULT 'NO'

);

CREATE TABLE Loans (

LoanID NUMBER PRIMARY KEY,

CustomerID NUMBER,

LoanAmount NUMBER,

InterestRate NUMBER,

DueDate DATE,

FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)

);

**Scenario 1: Applying a Discount to Loan Interest Rates**

BEGIN

FOR rec IN (SELECT \* FROM Customers)

LOOP

IF rec.Age > 60 THEN

UPDATE Loans

SET InterestRate = InterestRate - 1

WHERE CustomerID = rec.CustomerID;

END IF;

END LOOP;

COMMIT;

END;

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**Scenario 2: Promote Customer to VIP Status:**

BEGIN

FOR rec IN (SELECT \* FROM Customers)

LOOP

IF rec.Balance > 10000 THEN

UPDATE Customers

SET IsVIP = 'YES'

WHERE CustomerID = rec.CustomerID;

END IF;

END LOOP;

COMMIT;

END;

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**Scenario 3: Send Reminders for Loans Due in Next 30 Days:**

BEGIN

FOR rec 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 ' || rec.LoanID || ' for customer ' || rec.Name || ' is due on ' || TO\_CHAR(rec.DueDate, 'YYYY-MM-DD'));

END LOOP;

END;

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