**Exercise 1: Control Structures**

**Scenario 1:**

**Query:**

DECLARE

CURSOR customer\_cursor IS

SELECT CustomerID, DOB

FROM Customers;

v\_age INT;

BEGIN

FOR customer\_rec IN customer\_cursor LOOP

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

IF v\_age > 60 THEN

UPDATE Loans

SET InterestRate = GREATEST(InterestRate - 1, 1)

WHERE CustomerID = customer\_rec.CustomerID

AND InterestRate > 1;

END IF;

END LOOP;

COMMIT;

END;

**Scenario 2:**

**Query:**

ALTER TABLE Customers ADD IsVIP NUMBER(1) DEFAULT 0;

BEGIN

UPDATE Customers

SET IsVIP = 1

WHERE Balance > 10000;

COMMIT;

END;

SELECT CustomerID, Name, Balance, IsVIP

FROM Customers

WHERE IsVIP = 1;

**Scenario 3:**

**Query:**

BEGIN

FOR loan\_rec IN (

SELECT C.Name AS CustomerName, C.CustomerID, L.LoanID, L.EndDate

FROM Loans L

JOIN Customers C ON L.CustomerID = C.CustomerID

WHERE L.EndDate BETWEEN SYSDATE AND SYSDATE + 30)

LOOP

DBMS\_OUTPUT.PUT\_LINE('Reminder: Customer ' || loan\_rec.CustomerName ||

' (CustomerID: ' || loan\_rec.CustomerID || ')

has a loan (LoanID: ' || loan\_rec.LoanID || ')

due on ' || TO\_CHAR(loan\_rec.EndDate, 'YYYY-MM-DD') || '.');

END LOOP;

END;