**Exercise 1: Control Structures**

**Scenario-1:**

DECLARE

CURSOR customer\_cursor IS

SELECT CustomerID, DOB

FROM Customers;

v\_age NUMBER;

v\_customer\_id NUMBER;

v\_current\_interest NUMBER;

BEGIN

FOR customer\_record IN customer\_cursor LOOP

-- Calculate age

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

IF v\_age > 60 THEN

-- Fetch current interest rate for the customer

SELECT InterestRate INTO v\_current\_interest

FROM Loans

WHERE CustomerID = customer\_record.CustomerID;

-- Update interest rate with a 1% discount

UPDATE Loans

SET InterestRate = v\_current\_interest - 1

WHERE CustomerID = customer\_record.CustomerID;

DBMS\_OUTPUT.PUT\_LINE('Interest rate for CustomerID ' || customer\_record.CustomerID || ' updated.');

END IF;

END LOOP;

COMMIT;

END;

/

**Scenario-2:**

ALTER TABLE Customers ADD (IsVIP CHAR(1) DEFAULT 'N');

DECLARE

CURSOR customer\_cursor IS

SELECT CustomerID, Balance

FROM Customers;

BEGIN

FOR customer\_record IN customer\_cursor LOOP

IF customer\_record.Balance > 10000 THEN

-- Update IsVIP flag

UPDATE Customers

SET IsVIP = 'Y'

WHERE CustomerID = customer\_record.CustomerID;

DBMS\_OUTPUT.PUT\_LINE('CustomerID ' || customer\_record.CustomerID || ' promoted to VIP.');

END IF;

END LOOP;

COMMIT;

END;

/

**Scenario-3:**

DECLARE

CURSOR loan\_cursor IS

SELECT l.CustomerID, c.Name, l.LoanID, l.EndDate

FROM Loans l

JOIN Customers c ON l.CustomerID = c.CustomerID

WHERE l.EndDate BETWEEN SYSDATE AND SYSDATE + 30;

BEGIN

FOR loan\_record IN loan\_cursor LOOP

DBMS\_OUTPUT.PUT\_LINE('Reminder: Loan ID ' || loan\_record.LoanID || ' for Customer ' || loan\_record.Name || ' is due on ' || loan\_record.EndDate);

END LOOP;

END;

/