**Exercise 1: Control Structures**

**Scenario 1:**

DECLARE

v\_age NUMBER;

BEGIN

FOR rec IN (

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

FROM Customers c

JOIN Loans l ON c.CustomerID = l.CustomerID

) LOOP

-- Calculate age

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

IF v\_age > 60 THEN

-- Apply 1% discount

UPDATE Loans

SET InterestRate = InterestRate - 1

WHERE LoanID = rec.LoanID;

DBMS\_OUTPUT.PUT\_LINE('Loan '| rec.LoanID||':Interest rate discounted by 1% for customer '||rec.CustomerID||'(Age:'|| v\_age ||')');

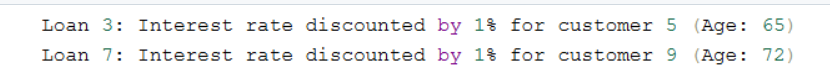
END IF;

END LOOP;

COMMIT;

END;

/

**OUTPUT:**

**Scenario 2:**

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

BEGIN

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

IF rec.Balance > 10000 THEN

UPDATE Customers

SET IsVIP = 1

WHERE CustomerID = rec.CustomerID;

DBMS\_OUTPUT.PUT\_LINE('Customer '||rec.CustomerID||'promoted to VIP.');

END IF;

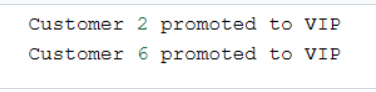
END LOOP;

COMMIT;

END;

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**OUTPUT:**

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**Scenario 3:**

BEGIN

FOR rec IN (

SELECT l.LoanID, c.CustomerID, c.Name, 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: Loan '||rec.LoanID ||'for customer'||rec.Name ||' (ID:'||rec.CustomerID ||') is due on ' || TO\_CHAR(rec.EndDate, 'YYYY-MM-DD'));

END LOOP;

END;

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**OUTPUT:**

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