**QUESTION:**

**Exercise 1: Control Structures**

**Scenario 1:** The bank wants to apply a discount to loan interest rates for customers above 60 years old.

* + **Question:** Write a PL/SQL block that loops through all customers, checks their age, and if they are above 60, apply a 1% discount to their current loan interest rates.

**Scenario 2:** A customer can be promoted to VIP status based on their balance.

* + **Question:** Write a PL/SQL block that iterates through all customers and sets a flag IsVIP to TRUE for those with a balance over $10,000.

**Scenario 3:** The bank wants to send reminders to customers whose loans are due within the next 30 days.

* + **Question:** Write a PL/SQL block that fetches all loans due in the next 30 days and prints a reminder message for each customer.

**SCENARIO 1:**

DECLARE

    CURSOR c\_senior\_customers IS

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

        FROM Customers c

        JOIN Loans l ON c.CustomerID = l.CustomerID;

    v\_age NUMBER;

BEGIN

    FOR rec IN c\_senior\_customers LOOP

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

        IF v\_age > 60 THEN

            UPDATE Loans

            SET InterestRate = InterestRate - 1

            WHERE LoanID = rec.LoanID;

        END IF;

    END LOOP;

    COMMIT;

END;

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SELECT \* FROM Loans;

**BEFORE:**

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**AFTER:**

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**SCENARIO 2:**

ALTER TABLE Customers ADD IsVIP VARCHAR2(5);

BEGIN

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

        IF rec.Balance > 10000 THEN

            UPDATE Customers

            SET IsVIP = 'TRUE'

            WHERE CustomerID = rec.CustomerID;

        ELSE

            UPDATE Customers

            SET IsVIP = 'FALSE'

            WHERE CustomerID = rec.CustomerID;

        END IF;

    END LOOP;

    COMMIT;

END;

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SELECT \* from CUSTOMERS;

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**SCENARIO 3:**

SET SERVEROUTPUT ON;

DECLARE

    CURSOR c\_due\_loans IS

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

        FROM Loans l

        JOIN Customers c ON c.CustomerID = l.CustomerID

        WHERE l.EndDate BETWEEN SYSDATE AND SYSDATE + 30;

BEGIN

    FOR rec IN c\_due\_loans LOOP

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

                             ' for customer ' || rec.Name ||

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

    END LOOP;

END;

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**TABLE:**

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**OUTPUT:**

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