**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.
  + **Solution:**

DECLARE

CURSOR customer\_cursor IS

SELECT CustomerID, InterestRate FROM Loans WHERE CustomerID IN (SELECT CustomerID FROM Customers WHERE TRUNC(MONTHS\_BETWEEN(SYSDATE, DOB) / 12) > 60);

v\_interest\_rate Loans.InterestRate%TYPE;

BEGIN

FOR customer IN customer\_cursor LOOP

v\_interest\_rate := customer.InterestRate - 1;

UPDATE Loans SET InterestRate = v\_interest\_rate WHERE CustomerID = customer.CustomerID;

END LOOP;

COMMIT;

END;

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**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.
  + **Solution:**

DECLARE

CURSOR customer\_cursor IS

SELECT CustomerID FROM Customers WHERE Balance > 10000;

BEGIN

FOR customer IN customer\_cursor LOOP

UPDATE Customers SET IsVIP = 'TRUE' WHERE CustomerID = customer.CustomerID;

END LOOP;

COMMIT;

END;

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**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.
  + **Solution:**

DECLARE

CURSOR loan\_cursor IS

SELECT CustomerID, LoanID FROM Loans WHERE EndDate BETWEEN SYSDATE AND SYSDATE + 30;

BEGIN

FOR loan IN loan\_cursor LOOP

DBMS\_OUTPUT.PUT\_LINE('Reminder: Loan ID ' || loan.LoanID || ' for Customer ID ' || loan.CustomerID || ' is due soon.');

END LOOP;

END;

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