**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.

**CODE:**

BEGIN

FOR cust\_rec IN (

SELECT l.LoanID

FROM Customers c

JOIN Loans l ON c.CustomerID = l.CustomerID

WHERE MONTHS\_BETWEEN(SYSDATE, c.DOB)/12 > 60

) LOOP

UPDATE Loans

SET InterestRate = InterestRate - (InterestRate \* 0.01)

WHERE LoanID = cust\_rec.LoanID;

DBMS\_OUTPUT.PUT\_LINE('1% discount applied to Loan ID: ' || cust\_rec.LoanID);

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.

**CODE:**

BEGIN

FOR cust\_rec IN (

SELECT CustomerID

FROM Customers

WHERE Balance > 10000

) LOOP

UPDATE Customers

SET IsVIP = 'TRUE'

WHERE CustomerID = cust\_rec.CustomerID;

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

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.

**CODE:**

BEGIN

FOR loan\_rec IN (

SELECT l.LoanID, l.DueDate, c.CustomerID, c.CustomerName

FROM Loans l

JOIN Customers c ON l.CustomerID = c.CustomerID

WHERE l.DueDate BETWEEN SYSDATE AND SYSDATE + 30

) LOOP

DBMS\_OUTPUT.PUT\_LINE(

'Reminder: Dear ' || loan\_rec.CustomerName ||

', your loan (ID: ' || loan\_rec.LoanID || ') is due on ' || TO\_CHAR(loan\_rec.DueDate, 'DD-MON-YYYY')

);

END LOOP;

END;

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