**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.

Solutions:

Scenario 1:

BEGIN

  FOR cust\_rec IN (SELECT CustomerID, DOB FROM Customers) LOOP

    IF MONTHS\_BETWEEN(SYSDATE, cust\_rec.DOB) / 12 > 60 THEN

      UPDATE Loans

      SET InterestRate = InterestRate - 1

      WHERE CustomerID = cust\_rec.CustomerID;

    END IF;

  END LOOP;

  COMMIT;

END;

/

Output:

A white background with black text

AI-generated content may be incorrect.

Scenario 2:

ALTER TABLE Customers ADD IsVIP CHAR(1);

BEGIN

FOR cust\_rec IN (SELECT CustomerID, Balance FROM Customers) LOOP

IF cust\_rec.Balance > 10000 THEN

UPDATE Customers

SET IsVIP = 'Y'

WHERE CustomerID = cust\_rec.CustomerID;

END IF;

END LOOP;

COMMIT;

END;

/

Output:

A white background with black text

AI-generated content may be incorrect.

Scenario 3:

DECLARE

  v\_name VARCHAR2(100);

BEGIN

  FOR loan\_rec IN (

    SELECT LoanID, CustomerID, EndDate

    FROM Loans

    WHERE EndDate BETWEEN SYSDATE AND SYSDATE + 30

  ) LOOP

    SELECT Name INTO v\_name FROM Customers WHERE CustomerID = loan\_rec.CustomerID;

    DBMS\_OUTPUT.PUT\_LINE('Reminder: Dear ' || v\_name ||

                         ', your loan (ID: ' || loan\_rec.LoanID ||

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

  END LOOP;

END;

/

Output:

A screenshot of a computer

AI-generated content may be incorrect.