**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:**

DECLARE

CURSOR c\_customers IS

SELECT customer\_id, age, loan\_interest\_rate

FROM customers;

v\_new\_interest\_rate NUMBER;

BEGIN

FOR customer IN c\_customers LOOP

IF customer.age > 60 THEN

v\_new\_interest\_rate := customer.loan\_interest\_rate - (customer.loan\_interest\_rate \* 0.01);

UPDATE customers

SET loan\_interest\_rate = v\_new\_interest\_rate

WHERE customer\_id = customer.customer\_id;

END IF;

END LOOP;

COMMIT; -- Commit the changes to the database

END;

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**Scenario 2:**

DECLARE

CURSOR c\_customers IS

SELECT customer\_id, balance

FROM customers;

BEGIN

FOR customer IN c\_customers LOOP

IF customer.balance > 10000 THEN

UPDATE customers

SET IsVIP = 'TRUE' -- Assuming IsVIP is a VARCHAR or CHAR column

WHERE customer\_id = customer.customer\_id;

END IF;

END LOOP;

COMMIT; -- Commit the changes to the database

END;

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**Scenario 3:**

DECLARE

CURSOR c\_loans IS

SELECT customer\_id, loan\_due\_date

FROM loans

WHERE loan\_due\_date BETWEEN SYSDATE AND SYSDATE + 30; -- Loans due in the next 30 days

BEGIN

FOR loan IN c\_loans LOOP

DBMS\_OUTPUT.PUT\_LINE('Reminder: Customer ' || loan.customer\_id ||

', your loan is due on ' || loan.loan\_due\_date);

END LOOP;

END;

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