**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.

DECLARE

CURSOR cur\_customers IS

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

FROM customers;

BEGIN

FOR customer\_rec IN cur\_customers LOOP

IF customer\_rec.age > 60 THEN

UPDATE customers

SET loan\_interest\_rate = loan\_interest\_rate - 1

WHERE customer\_id = customer\_rec.customer\_id;

END IF;

END LOOP;

COMMIT;

END;

**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.

DECLARE

CURSOR cur\_customers IS

SELECT customer\_id, balance

FROM customers;

BEGIN

FOR customer\_rec IN cur\_customers LOOP

IF customer\_rec.balance > 10000 THEN

UPDATE customers

SET IsVIP = TRUE

WHERE customer\_id = customer\_rec.customer\_id;

END IF;

END LOOP;

COMMIT;

END;

**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.

DECLARE

CURSOR cur\_loans IS

SELECT loan\_id, customer\_id, due\_date

FROM loans

WHERE due\_date BETWEEN SYSDATE AND SYSDATE + 30;

v\_customer\_name customers.name%TYPE;

BEGIN

FOR loan\_rec IN cur\_loans LOOP

SELECT name INTO v\_customer\_name

FROM customers

WHERE customer\_id = loan\_rec.customer\_id;

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

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

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

END LOOP;

END;