**Exercise 1: Control Structures**

**CODE**

**Create Tables**

**--**Customers

CREATE TABLE customers (

customer\_id INT,

name VARCHAR(100),

age INT,

balance DECIMAL(10, 2),

is\_vip BIT,

interest\_rate DECIMAL(4, 2)

);

--Loans

CREATE TABLE loans (

loan\_id INT,

customer\_id INT,

due\_date DATE,

loan\_amount DECIMAL(10, 2)

);

**Insert Sample Data**

INSERT INTO customers VALUES (1, 'John Doe', 65, 5000.00, 0, 6.5);

INSERT INTO customers VALUES (2, 'Jane Smith', 45, 12000.00, 0, 7.2);

INSERT INTO customers VALUES (3, 'Alex Brown', 70, 8000.00, 0, 8.0);

SELECT \* FROM customers;

INSERT INTO loans VALUES (101, 1, GETDATE() + 10, 20000.00);

INSERT INTO loans VALUES (102, 2, GETDATE() + 40, 15000.00);

INSERT INTO loans VALUES (103, 3, GETDATE() + 5, 30000.00);

**Scenario 1 - Apply 1% Discount to Interest Rate for Customers Aged Above 60**

PRINT 'Scenario 1: Interest‑rate discount for customers over 60 ';

UPDATE customers

SET interest\_rate = interest\_rate - 1

WHERE age > 60;

//View Updated Customer Data

SELECT customer\_id, name, age, interest\_rate

FROM customers

WHERE age > 60;

**Scenario 2 - Set IsVIP Flag to True for Customers with Balance > 10000**

PRINT 'Scenario 2: Customers promoted to VIP (balance>10 000) ';

UPDATE customers

SET is\_vip = 1

WHERE balance > 10000;

//View Updated Customer Data

SELECT customer\_id, name, balance, is\_vip

FROM customers

WHERE is\_vip = 1;

**Scenario 3 - Print Loan Reminders Due Within Next 30 Days**

PRINT 'Scenario 3: Loan reminders (due ≤ 30 days) ';

SELECT c.name AS Customer\_Name,

l.loan\_id AS Loan\_ID,

l.due\_date AS Due\_Date,

'Reminder: Your loan is due soon!' AS Message

FROM loans l

JOIN customers c ON c.customer\_id = l.customer\_id

WHERE l.due\_date <= GETDATE() + 30;

**OUTPUT**

