LAB 1 (DAA)

Q1: Given an integer num, repeatedly add all its digits until the result has only one digit, and return it.

Example:

Input: num = 38

Output: 2

Explanation: The process is

38 --> 3 + 8 --> 11

11 --> 1 + 1 --> 2

Since 2 has only one digit, return it.

Q2: Write a program to implement Linear Search. The program should search for an element in an array and display its position if found, otherwise display an appropriate message.

Q3: Given an array of integers nums and an integer target, return indices of the two numbers such that they add up to target. You may assume that each input would have exactly one solution, and you may not use the same element twice. You can return the answer in any order.

Example:

Input: nums = [2,7,11,15], target = 9

Output: [0,1]

Explanation: Because nums[0] + nums[1] == 9, we return [0, 1].

Task to be completed:

- Write the pseudocode for the algorithm.
- Implement the solution in any language**.**
- Try to Analyze the time complexity of your solution.