LAB 01:   Introduction to Data Structures and Algorithms

1. Scope of Knowledge:

- ➢ Basic knowledge of data structures and algorithms
- ➢ Understand types of data structure
- ➢ Understand recursive algorithm

2. Marterials/Softwares/Tools:

- ➢ Visual Studio Code

3. Coding Convention:

- ➢ All identifiers must be in English and lower case
- ➢ Follow the valid identifers naming rules in C
- ➢ Tab is 4 characters
- ➢ Curly braces must be aligned
- ➢ Statements in curly brackets must be indented by 1 tab

4. Exercise:

Exercise 1:

Use a recursive algorithm to write a program to print numbers between 1 and 100.

Exercise 2:

Write a program to display the Fibonacci sequence of n Fibonacci numbers (using Recursive Algorithm).

Exercise 3:

Write a program to calculate the sum of the first n terms of an arithmetic progression.

Requirements:

- Use function
- Write 2 algorithms for calculating factorial using loop and recursion