Lab 13
Recursion

Recursion 1

Write a recursive function definition for a function that has one parameter n of type int and that returns the factorial of n.

The factorial function **n!** is defined by

        n! = 1 × 2 × 3 × 4 × . . .× n

Embed the function in a program and test it. (*Assume that **0! = 1**)

Recursion 2

Write a recursive function definition for a function that has one parameter n of type int and that returns the n-th Fibonacci number. Embed the function in a program and test it.

The Fibonacci numbers **Fn** are defined as follows.

        F$_0$ = 1, F$_1$ = 1, and F$_{i+2}$ = F$_i$ + F$_{i+1}$
        where i = 0, 1, 2, . . .

Each number is the sum of the previous two numbers. The first few Fibonacci numbers are:

        1, 1, 2, 3, 5, and 8