

Programming Exercise 15.2

Fibonacci Series

Purpose. The purpose is for you give you a chance to apply recursion, by writing your own recursive solution.

Requirements. Write `myFibonacci.cpp`, which should calculate a value in the "Fibonacci number" series. This series is: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34,..., where 0 is the zeroth number in the series, 1 is the first, 1 is the second, and so on. Note that for each number after the opening 0 and 1, the value equals the sum of the two values that precede it. For example, $13 + 21 = 34$.

So here's what we know: the Fibonacci number for index 0 or 1 equals the index. There are no negative index values -- you can ignore that possibility. The Fibonacci number for any other index equals the sum of the Fibonacci numbers for the index-1 and the index-2.

The program should prompt the user for an series index (greater or equal to zero) and print the Fibonacci number corresponding to that index.

Program I/O. Input from the console keyboard: one number, a sequence number equal to zero or greater. Output: the Fibonacci number corresponding to the sequence number input.

Example. Your program's console I/O should look something like this, with user input in blue:

```
Enter an index [0 or greater]: 6
The Fibonacci number at index 6 is 8.
```