ITP 365: Introduction to C++ Programming

Lab Practical 1 Due: BoNC (Beginning of Next Class)

Goal

In this lab, you'll practice writing a function and basic I/O with C++.

Setup

- Create a new project using either XCode or VisualStudio. Name the project **Lab 1**.
- Create a .cpp file in your project called **lab01.cpp**. All of today's code will go in there.
- All your files must begin with the following (replace the name and email with your actual information):

```
// Name
// ITP 365, Spring 2017
// Lab 1
// USC email
```

Requirements

Your program will calculate Fibonacci numbers. Check the Wikipedia article on Fibonacci numbers if you'd like to know more about them. In their general form they can be described as…

$$f_n = f_{n-1} + f_{n-2}$$

lab01.cpp file:

- Create a function called "fib". This function will accept 1 unsigned integer for input. It will return 1 unsigned integer for output. The input is the Fibonacci number to calculate. For example, if "8" is passed as input, the function should return "21".
- In the main function, prompt the user for input. Display the Fibonacci numbers sequence through that place.

Sample Output

Your program should resemble the following output (user input is in **RED**):

```
How many Fibonacci numbers shall I compute? 12
0       0
1       1
2       1
3       2
4       3
5       5
6       8
7       13
8       21
9       34
10      55
11      89
12      144
```

Deliverables

1. Create a ZIP compressed folder containing lab01.cpp, named **Lab1**. This can be done by:
    a. WINDOWS:
        i. Select all your files
        ii. Right click
        iii. Send to ->
        iv. Compressed (zipped) folder
        v. Rename this zipped folder to Lab1
        vi. Submit this zipped folder through Blackboard
    b. OSX:
        i. Select all your files
        ii. Right click
        iii. Compress items
        iv. Rename this Archive.zip to Lab1
        v. Submit this zipped folder through Blackboard