

## Program 1: Lg Lg n

The purpose of this exercise is to get you started in C# by writing a simple C# program, compiling and running it, and turning in your source code and executable electronically. Please use Microsoft Visual Studio under Windows for development. You can do the projects for this class in the ulab machines booted in Windows. Note that you should save your project on a network drive, not the C: drive. Microsoft offers a free version of Visual Studio for Windows online.

Your program should compute  $\text{floor}(\lg \lg n)$  without using any special math library functions to compute  $\lg$ . It should be a command-shell program like the example below (which uses a rather poor algorithm to compute the Nth Fibonacci number).

Turn in your program by zipping up your entire project directory and uploading that through the moodle assignment. Also turn in the program information sheet on the opposite side of this page.

Use good programming style, including comments as needed, consistent indentation, appropriate variable and function names, good organization, etc.

```
-----Fib.cs-----
/*****
 * Simple sample C# selection, showing stdin, stdout, static, cetera
 *
 * Harry Plantinga, 9/2011
 *
 *****/
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;

namespace Fib
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Fantastic Fib Finder!");
            while (true)
            {
                Console.Write("\nEnter N: ");
                long n = long.Parse(Console.ReadLine());
                long fib = Fib(n);
                Console.WriteLine("Fib({0}) = {1}.", n, fib);
            }
        }

        static long Fib(long n)
        {
            if (n <= 2)
                return 1;
            else
                return Fib(n - 1) + Fib(n - 2);
        }
    }
}
```

## CS212 Program 1 – Grading Sheet

Due date: \_\_\_\_\_

Name: \_\_\_\_\_ Section: \_\_ Date turned in: \_\_\_\_\_ Late? \_\_\_\_\_

Parts of the program I didn't get to work:

Comments on this assignment:

\_\_\_\_\_ For Grader's Use \_\_\_\_\_

- Program compiles and runs (50) \_\_\_\_\_
- Correctly compute  $\text{floor}(\log \log n)$  without using library functions (30) \_\_\_\_\_
- Good programming style including comments as described (10) \_\_\_\_\_
- Mechanics: turn in program grading sheet; submit electronically (10) \_\_\_\_\_
- Total (100)** \_\_\_\_\_