Assignment 2: Intro Threads

Due Date: Turn this in before class on Thursday, September 15th.

For this assignment, you will take the `colors.cpp` and `adding.cpp` code that you worked on in-class, and rewrite them in several ways.

Rewriting the programs

You will give me four versions of both the `colors` program and the `adding` program.

Version 1

File names: `colors1.cpp, adding1.cpp`

These are the programs as you started work on them: one function per thread; the functions take no arguments.

Version 2

File names: `colors2.cpp, adding2.cpp`

Rewrite your programs to use function objects. The function objects should have constructors that take arguments. This means that you only need a single class of function object for each program.

Move the global data structures into `main`.

Version 3

File names: `colors3.cpp, adding3.cpp`

Rewrite your programs to use thread entry functions with parameters. Use these functions directly for thread creation. Because the functions have parameters, you should only need one thread function per program.

As in version 2, move the global data structures into `main`.

Version 4

File names: `colors4.cpp, adding4.cpp`

Rewrite your programs to use lambdas to create the threads. You shouldn't have any defined thread function.

As in version 2, move the global data structures into `main`.

Turn it in

- You should have eight source files.
- Create a Makefile that builds those eight files.
- You can work alone, in pairs, or in groups of three.
- All group members' names should be at the top of **every** source file.
- All group members should turn in separate copies of the code.

Make a folder labeled `Assignment 2` in your turn-in directory and copy in your source files and Makefile.