lab 02: Producer Consumer

Instructions: The purpose of this lab is to continue pthreading, which will be the modeling used for parallalism.

Please implement the following functions:

```
// Write the following function to return the number of primes using the
// producer consumer code in class
long find_number_of_primes(const int num_consumers, const unsigned long highest) {
    long sum = 0;

    return sum;
}

// Now extend the first function to create any number of producers
// Give each prodcuer a equal range to producer for the consumers.
long find_number_of_primes_mp(const int num_producers, const int num_consumers,
        const unsigned long highest) {
    long sum = 0;

    return sum;
}

// Finally extend the first function to have each consumer search a range
// of numbers. I recommend editting pargs_t to contain the range.
// This has one producer.
long find_number_of_primes_chunk(const int num_consumers,
        const unsigned long highest,
        const unsigned long chunk) {
    long sum = 0;

    return sum;
}
```

How to turn in:
Turn in via GitHub. Ensure the file(s) are in your directory and then:

- $ git add <files>
- $ git commit
- $ git push

Due Date: Sep 15, 2022 2359

Teamwork: No teamwork, your work must be your own.