Lab 13

Part 0: Clone the Repo

This week's repository is slightly different. The name is not username-lab13. You should instead do the following command

`git clone https://github.com/physics91si/username-threads.git threads`

Part 1: Creating a Simple Chain of Threads

Write a program called `ThreadsChain.py` that creates a thread (let's call it Thread 1). Thread 1 creates another thread (Thread 2); Thread 2 creates Thread 3; and so on, up to Thread 50. Each thread should print "Hello from Thread <num>!". You don't have to worry about the order, but each thread must create exactly one child thread till you reach the 50th thread.

Part 2: Locks? Who Needs Them?

Inspect file `Locks.py`. Suppose all of the work was done without using multithreading, what is the expected result of the script? Now, run the file. Does it give you the result you were expecting? Why do you think that happened? Try fixing it using what you know about locks (`threading.Lock()`)

Part 3: Thread and Conquer (Optional)

Write a program called `ThreadMax.py` that finds the maximum value in an array of ints using ten threads. You should construct your array of random numbers. We highly recommend having the array of length of a power of 10.