Threaded sorting

Cpt S 223 Homework Assignment

by Evan Olds

Submission Instructions:

Submit source code (zipped) to Angel BEFORE the due date/time. If the Angel submission is not working, then submit to TA via email BEFORE the due date/time. Optional: Include a readme.txt file in the zip with any relevant information that you want the grader to be aware of.

Assignment Instructions:

Alter your previous sorting homework assignments so that insertion sort, heap sort, quick sort, and merge sort all run simultaneously on separate threads. You can add in shell sort too if you wish, but that's not required. Make sure that you create four copies of the original random number array and have each algorithm sort its own array (sharing the same array between two simultaneously running sorting algorithms will cause problems).

Add a menu option for kicking off the threads. The choice of a single menu option must create all 4 (or 5) threads at once. At the moment each sorting algorithm completes, display a message indicating its name. Use std::thread for your threads. There are many online references for this including: http://www.cplusplus.com/reference/thread/thread/.