CS 470/570
Homework 1

Due Tuesday September 19
Parallel Quicksort

- Use the fork and join operations to implement a parallel Quicksort on an array of integers in Java.
- The program expects two or three command line arguments. The first argument is the size of array to be sorted. The second argument is a threshold value. If a third argument is provided it is the name of a text file to which the sorted results should be written. If a third argument is not provided the sorted results should be written to standard output. Partitions with a size less than the threshold should be sorted sequentially.
- Use a random number generator to create the initial values stored in the array.
- The array should be sorted in **descending** order.
- See the class discussion for a review of the Quicksort algorithm.
Homework 1 Submission

- Send only one Java file called ParQuick.java
- The main method of the class ParQuick should generate the initial values for the array, create a fork/join pool, invoke the fork/join pool and write the results (either to a file or standard output based on the presence of the third command line argument.)