

## **COP 3502 Fall 2023 Section 1 Recitation Program #3**

### **Planting Trees**

**Kattis link: <https://open.kattis.com/problems/plantingtrees>**

For each recitation program, in order to get full credit, you must submit your solution to open.kattis.com and get your solution accepted on all test cases. In addition, each one will have some separate requirements to fulfill based on your code. When submitting your work to Webcourses, please carefully read the corresponding directions document before submitting all of your files.

**NOTE: Over the course of the semester, you must submit TWO out of the four recitation programs. It is expected that while you are in recitation, you start working on each of them. But, afterwards, you can choose which two to finish up.**

#### **What This Program Is Testing**

This problem is easiest to solve if the input data is sorted. Since there can be as many as  $10^5$  values in the input, an efficient sort (either Merge Sort or Quick Sort) must be implemented. Thus, this assignment is testing sorting, and then some standard problem solving skills (after the data is sorted). Your grade will not only be based on whether or not you get the program accepted on Kattis, **but also your use of Merge or Quick Sort AND dynamically allocated memory.** (20 points will be allocated for correctness and 10 points for your actual code.)

#### **What to Submit**

Please submit the following:

- 1) Your source file, plantingtrees.c.
- 2) A screenshot of your solution's accepted status on Kattis. **This screen shot needs to include your name at the top right and all of the check marks as well as the starting of your code below.**