Problem 1.

- `SegmentTree.cpp` implements the segment tree data structure for length of union of intervals problem.

- It produces the correct output for all provided inputs.

- Included is a makefile to compile/build the executable, `a.out`, using Clang++.

- `test.py` runs `a.out` on all the input files in the current working directory. It prints out the execution time in milliseconds and whether the output file `my*.out` matches the desired output file `*.out`.

Input File	Runtime (milliseconds)
100	3.59
1000	21.7
10000	496