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CIS554

Homework 4

1. I actually didn't encounter any issues sorting large arrays/vectors with recursion first-hand. Designing a recursive implementation of selection sort was challenging due to the need to establish a case where the function would stop making further recursive calls, and tracking the current position of the sorting algorithm was difficult, but I never came across any problems relating to input array/vector size.
2. I was unable to use the provided TimeStamp library because I don't have visual studio, have been using g++ to compile for previous homeworks, and did not expect to encounter problems linking the library using g++. I wasn't able to link the .lib file using g++, though, so I've simply added the code to print timestamps commented out. Taking an educated guess, I'd assume that the recursive and iterative implementations of selection sort perform similarly, as an analysis of the runtime shows that they should both run in O(n^2) time.
3. Again, this is just an educated guess given that I couldn't get the timestamps working, but I'd assume the C-style arrays performed better simply due to the fact that they're a built-in data structure.