Ethan Henry

Asgn5 WRITEUP

The different sorting algorithms each have different time complexities as follows:

Bubble sort: n^2

Quick Sort: n log(n)

Binary Insertion Sort: log2(n)

Shell Sort: Depends on the Gap Sequence

I mostly learned from the different sorting algorithms that there are different sorting algorithms for different uses. There are some that are good broad searches, some that work best with unsorted lists, and some that work best with sorted lists. The Constant Time Complexity is also good, as it allowed me to know if an algorithm wasn't working correctly based on how long it took to run. I primarily experimented with the sorts by putting in a random list, and already sorted list, and a list that aws sorted from greatest to least. I then compared these with the example sort given to us on Piazza to see how the starting condition of the list could effect run time for some but not others.