Patrick Hoverson

Rene German

CPSC-350

December 19, 2020

Assignment 6 Write-Up

Assignment 6 asked us to implement, use, and examine five sorting algorithms and time them on a large data set. The five algorithms were Quick Sort, Merge Sort, Selection Sort, Insertion Sort, and Bubble Sort. Implementing and using them was pretty straight forward. I used Zybook to help me get the correct code, and I used cplusplus.com to help me figure out how to use “time.h”.

The times were not more drastic than I expected. We are dealing with a fraction of a second measurement, so it may seem like, no matter what, they are close. Although, when it comes down to those minor fraction changes, they can be pretty far apart from each other. While I didn’t expect it to be at a fraction of a second, I did expect there to be a decent difference.

Depending on your language choice, it can cause more or less code for the program to run through, therefore causing a difference in time across languages. For our class/assignment, C++ was the language we used.

The shortcomings of empirical analysis do show themselves in this assignment. There seemed to be some variance between each run of the code, probably due to the machine I’m using. If we used mathematical analysis, we would be able to get a more accurate time for each algorithm and compare them.