Assignment 6 – Sorting Algorithms Karolina Michalewska December 14, 2018

Results:

After completing this assignment and learning more about the different sorting algorithms, quick sort, insertion sort, bubble sort and gnome sort, I could see the drastic difference in performance between the three algorithms. The results were as expected, with quick sort being the fastest running sort, followed by insertion sort and bubble sort along with gnome sort. The fastest of them all, quick sort, is useful for large sets of data. This algorithm is clearly faster than the rest because of the divide and conquer approach, splitting the data into smaller sets and sorting these sets individually, then finally combining them into the final result. Insertion sort is a useful sorting algorithm for large sets of data that is partially sorted. As the second fastest sorting algorithm, insertion sort looks through the whole set of data before even sorting. This allows the algorithm to work faster as it does not have to run the sort through sections of data that is already sorted. Lastly is the bubble and gnome sort, running at the slowest runtime. These two sorting algorithms are really only meant for small sets of data. These sorts can be used if one needs to quickly sort some data, avoiding any complex coding.