



There is a big difference between execution time in for loops versus recursion. In the problems we did in this assignment we saw that for loops created a linear equation when we measured time. This is something that could also happen with recursion, but it won't happen necessarily. With recursion you can have exponentials that make the complexity much worse. Therefore, we believe for loops are a bit faster for some methods.

Insertion sort is a fast method for sorting data; however, when dealing with large amounts of data it is not as effective since its complexity at worst case scenario is $O(n^2)$. There are much quicker ways to sort data with other methods like radix sort that have a complexity that doesn't increase exponentially.