Borja Rojo

University of Rochester

CSC 172

Lab 14

Sorts

Bubble Sort

Runtime of O(n^2)

Insertion Sort

Runtime of O(n^2)

Shell Sort

Runtime of O(n^(3/2)

This is an interesting result, as the resulting data shows that the number of counts increases linearly and the time increases linearly for this portion of the data as well. There are some spikes in the average at the end, but there is a clear line that can be drawn under the Shell Sort Time Ave data that can hug the data at the lower points.

Array.sort()

Runtime of O(n\*log(n))

With every iteration that I tried this, the run time of the first arrays where much higher that then their subsequent ones. I’m not sure if that has to do with how the method is optimized in Java or if it is meant to be used with arrays of larger sizes.