ECE 590 Project 1 Report

Do your algorithms behave as expected for both unsorted and sorted input arrays?

Which sorting algorithm was the best (in your opinion)? Which was the worst? Why do you think that is?

Why do we report theoretical runtimes for asymptotically large values of n?

What happens to the runtime for smaller values of n? Why do you think this is?

Why do we average the runtime across multiple trials? What happens if you use only one trial?

What happens if you time your code while performing a computationally expensive task in the background (i.e., opening an internet browser during execution)?

Why do we analyze theoretical runtimes for algorithms instead of implementing them and reporting actual/experimental runtimes? Are there times when theoretical run- times provide more useful comparisons? Are their times when experimental runtimes provide more useful comparisons?