Lab 5 Report Items:

1. **Checklist for program testing**

   a. Laptop was plugged in, and not running off battery power.

   b. All unneeded processes (programs) on both the host OS (Windows / OSX) and Ubuntu Linux were shut down.

   c. "Sleep on inactivity" function on laptop was disabled.

   d. Laptop was kept in a well-ventilated place, and its air-flow intake/output ports were not blocked.

2. **Reporting Table**

	Asymptotic Complexity f(n) = O?	Observed run time (seconds)	Your notes/observations
Bubble Sort	O(n^2)	10127.2	See Below
Merge Sort	O(n log n)	.338754	

In the column titled "Your notes/observations", report whether 1. Your observed run time is consistent with the (theoretical) asymptotic complexity of the sorting algorithm, 2. Did you observe anything obvious, or unusual that either met your expectation or was unexpected, and 3. Anything else that you might wish to state.

Observations:

Both run times align with the theoretical complexity values. I was a bit surprised to see merge sort be so fast because I ran bubble sort first, and after waiting so long I at least expected merge to take a couple minuets. However, after thinking about it more, these values do make sense, because n^2 is growing exponentially while nlogn has an asymptotic, and the data set we used was very very large.