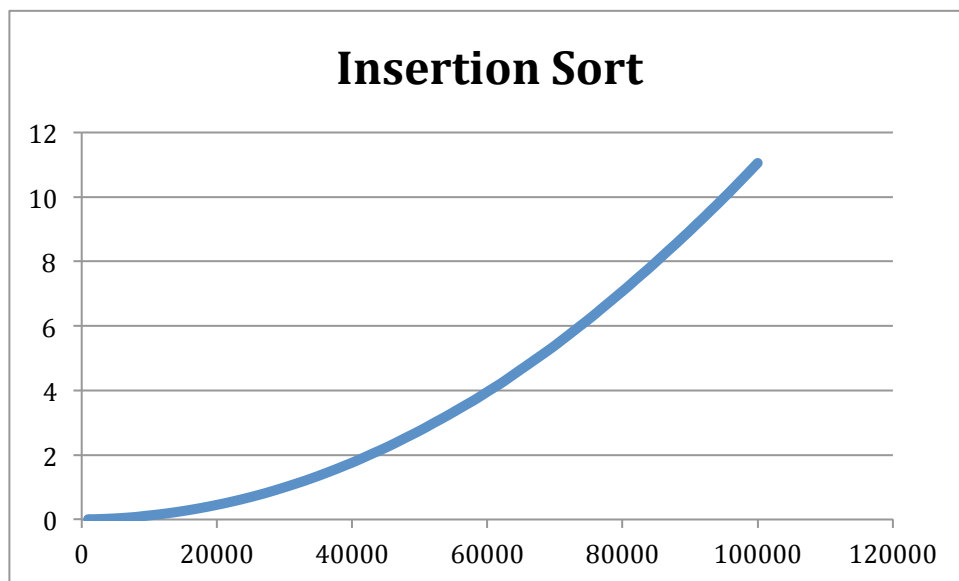Tsung Yu Ho

2911531

Due:04/11/2018

Bubbler Sort

Insertion Sort

Selection sort

y-axis	values
450	
400	
350	
300	
250	
200	
150	
100	
50	
0	

x-axis: 0, 20000, 40000, 60000, 80000, 100000, 120000

Merge Sort

y-axis: 0.45, 0.4, 0.35, 0.3, 0.25, 0.2, 0.15, 0.1, 0.05, 0

x-axis: 0, 20000, 40000, 60000, 80000, 100000, 120000

Quick Sort

y-axis: 2.5, 2, 1.5, 1, 0.5, 0

x-axis: 0, 20000, 40000, 60000, 80000, 100000, 120000

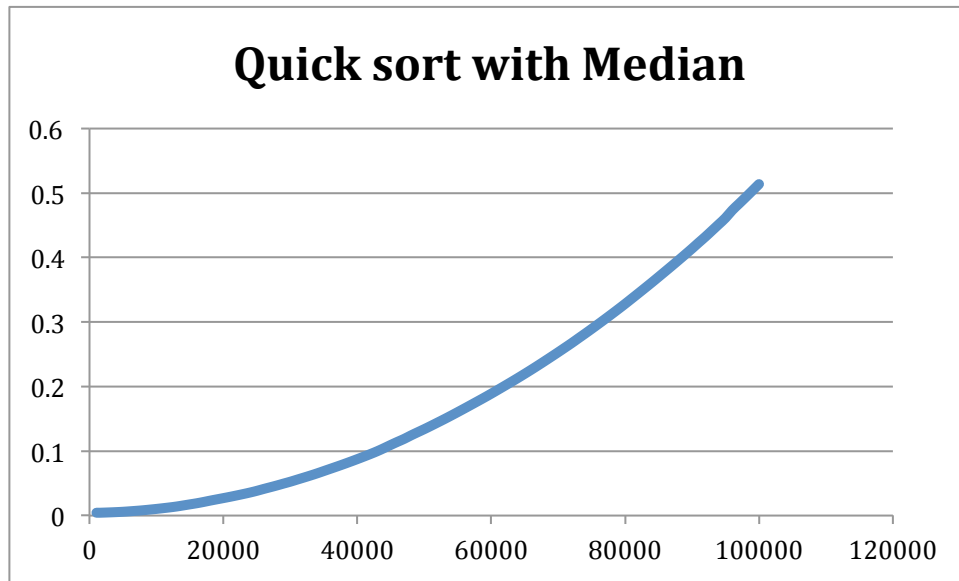## Quick sort with Median
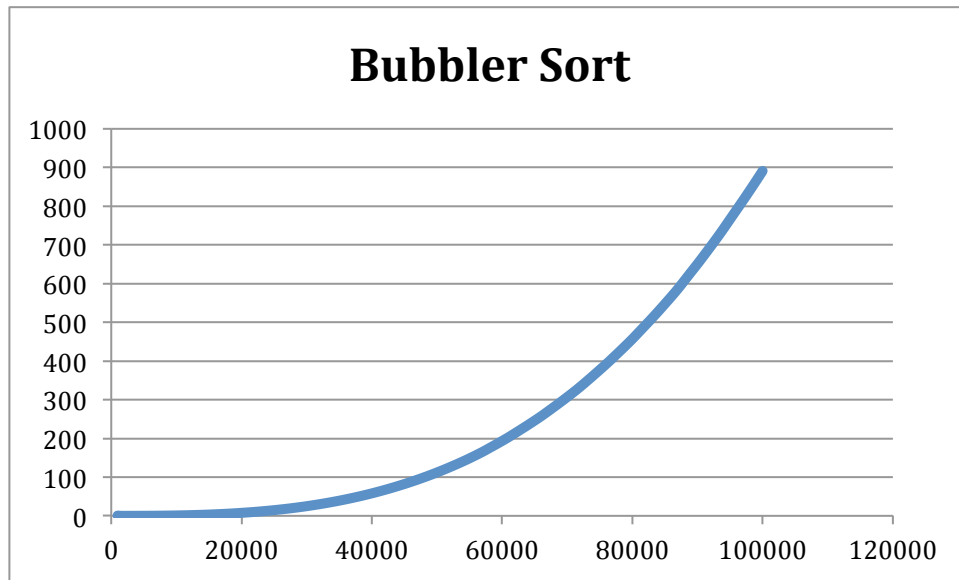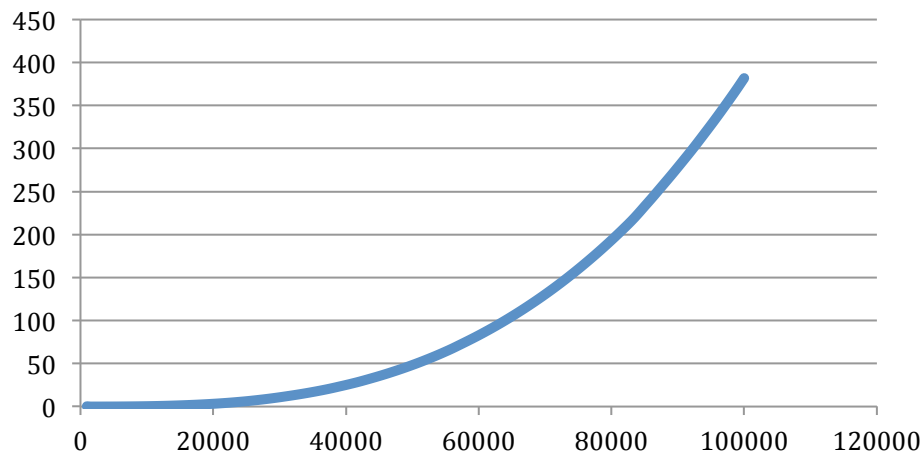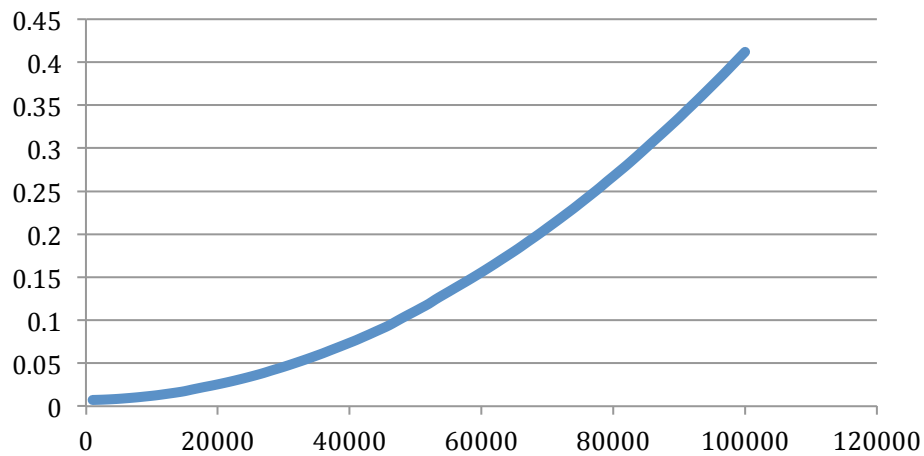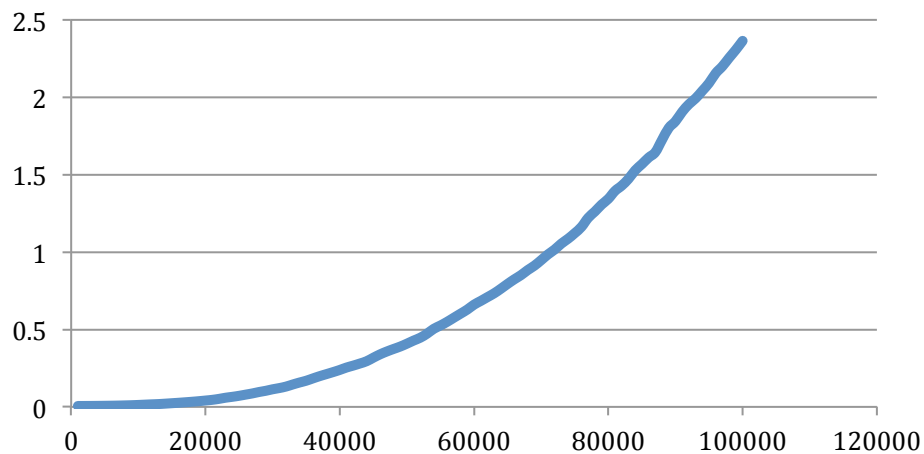
2: I think it fits. Because for bubble, insertion and selection. When value goes up, the time increases in n^2. So bubble, insertion and selection are O(n^2).

3. For O(nlog(n)) will increase slowly than O(n^2), In this case we will have merge sort, quick sort and quick sort with median. For merge sort in my graph, the line looks like nlog(n). But for quick sort with median and quick, It looks between quick sort and quick sort with median. However, the worst case for quick sort is O(n^2), so I think it still make sense.

4. I think for my case I don't have outliners, I will say probably quick sort graph and quick sort with median is kind of between O(nlog(n)) and O(n^2).