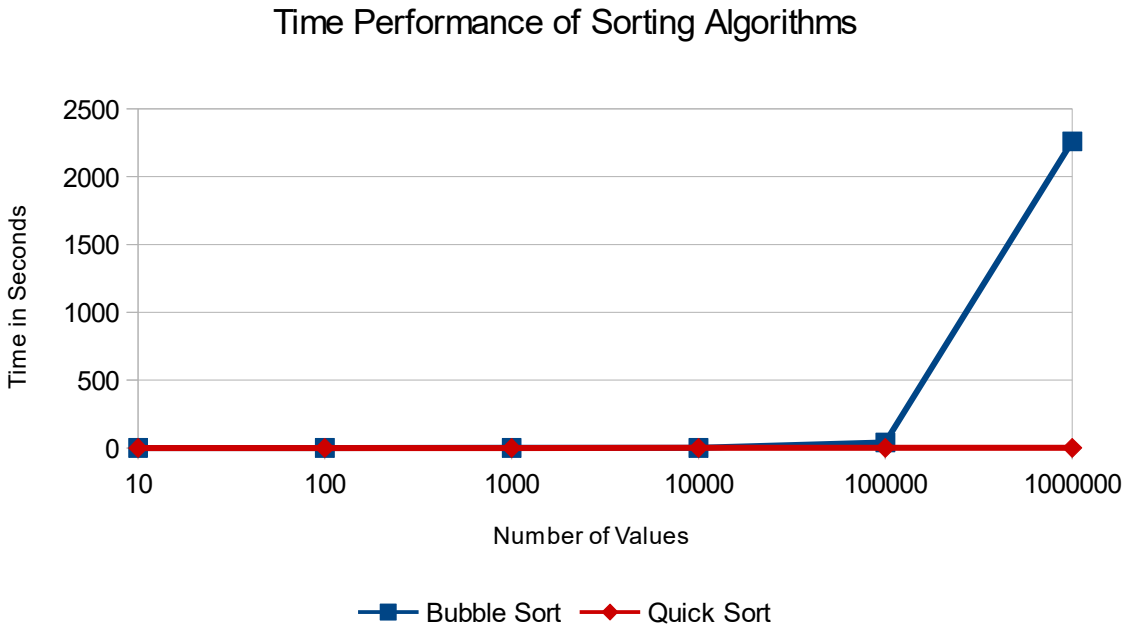
Result Analysis of Sort and Max Find

Sort Function Performance

In comparing the implementation of Bubble Sort to that of Quick Sort, Quick Sort was found to run faster in all cases. In the case of n = 10^6, Quick Sort ran faster by several orders of magnitude. With these implementations, Quick Sort should be used in every use case.



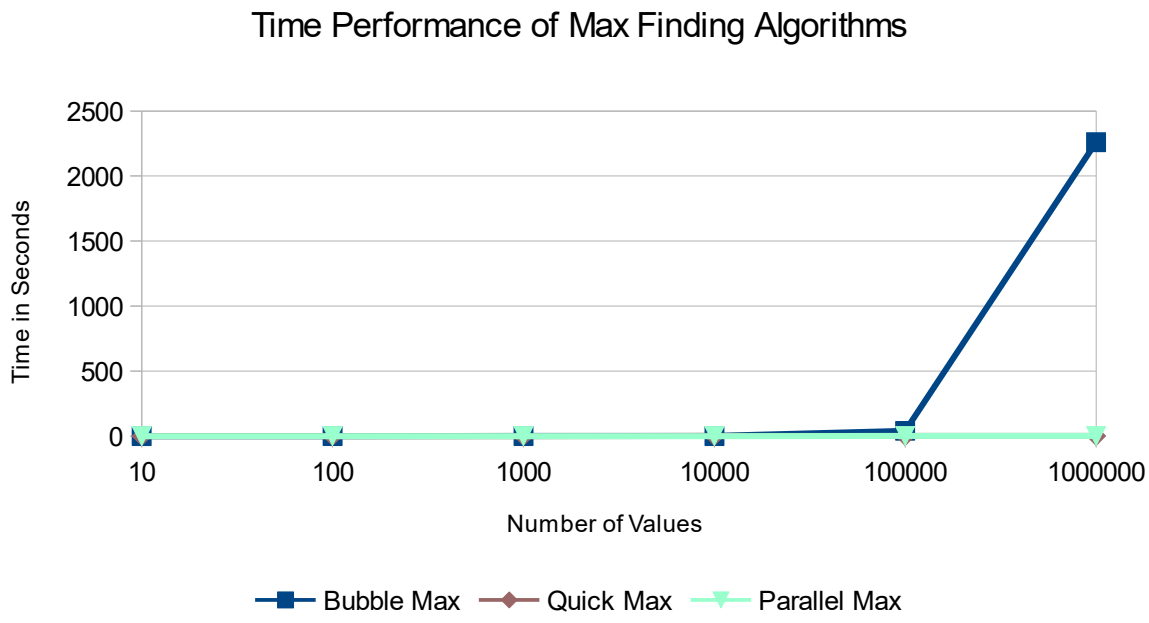
Exact Values in Seconds:

n	Bubble Sort	Quick Sort
10	0	0
100	0	0
1000	0.005	0
10000	0.568	0.002
100000	40.618	0.027
1000000	2260.413	0.334

Max Find Function Performance

Since the implementations of Bubble Max and Quick Max only differ from Bubble Sort and Quick Sort by the inclusion of a single print line, the results from the Bubble Sort and Quick Sort experiments will be re-used.

In comparing the implementation of Bubble Max to that of Quick Max and Parallel Max, Parallel Max was found to run several orders of magnitude faster than Bubble Max, and a single order of magnitude faster than Quick Max. The results from the previous experiment are still relevant when comparing Bubble Max to Quick Max.



Exact Values in Seconds:

n	Bubble Max	Quick Max	Parallel Max
10	0	0	0
100	0	0	0
1000	0.005	0	0
10000	0.568	0.002	0
100000	40.618	0.027	0.003
1000000	2260.413	0.334	0.026