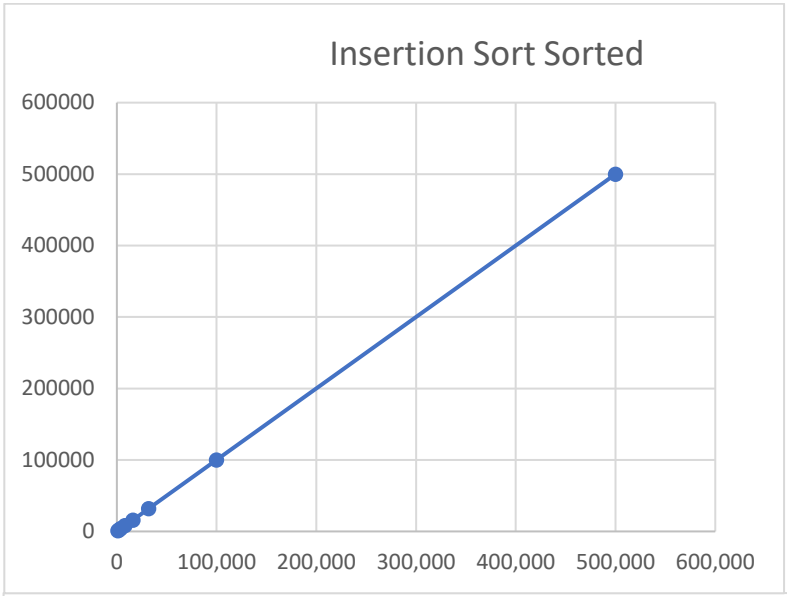
Algorithm Name: Selection Sort		**Type of list (sorted or unsorted):** Sorted
List Size	Comparisons	Time (seconds)
1,000	499500	0.044880629
2,000	1999000	0.261283398
4,000	7998000	1.317755699
8,000	31996000	4.2546556
16,000	127992000	21.27978373
32,000	511984000	121.7652142
100,000	4999950000	631.2235355
500,000	1.25E+11	16536.82662

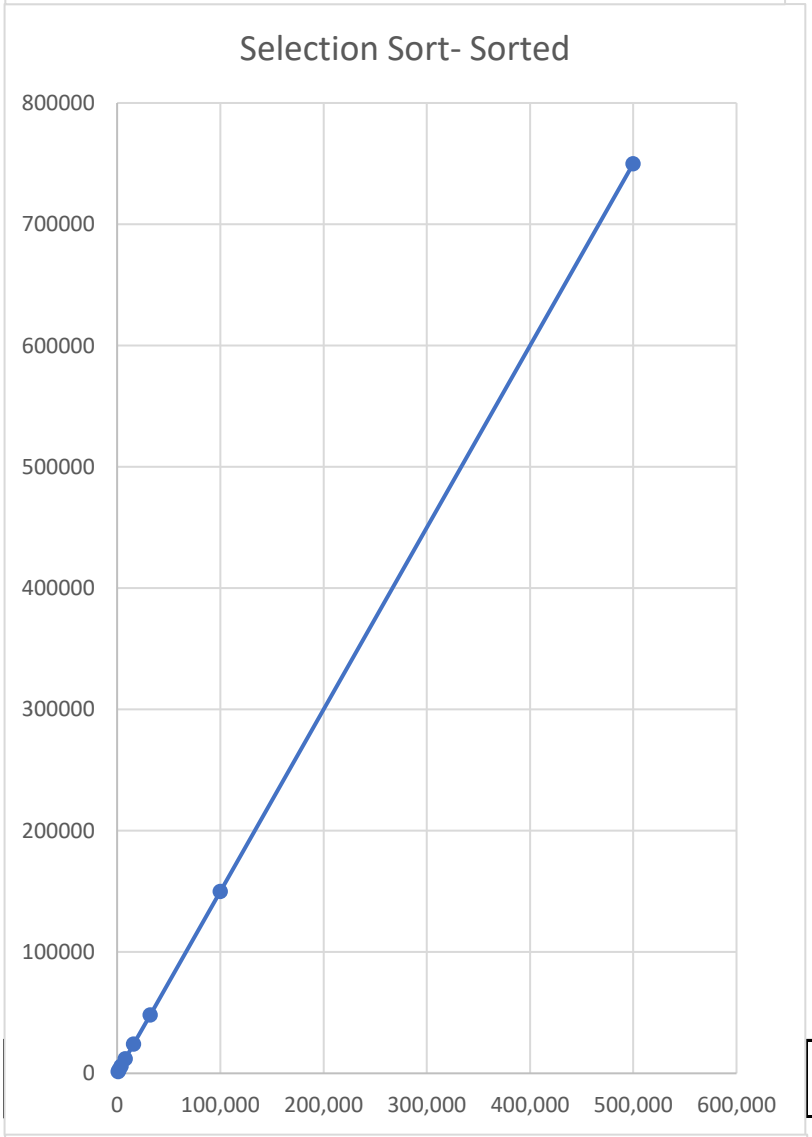
Algorithm Name: Insertion Sort		**Type of list (sorted or unsorted):** Sorted
List Size	Comparisons	Time (seconds)
1,000	1000	0
2,000	2000	0.000998259
4,000	4000	0
8,000	8000	0.001994848
16,000	16000	0.002992153
32,000	32000	0.008135319
100,000	100000	
500,000	500000	
Algorithm Name: Heap Sort		**Type of list (sorted or unsorted):** Sorted

List Size	Comparisons	Time (seconds)
1,000	9487	0.010970116
2,000	18987	0.044883966
4,000	37987	0.049902916
8,000	75990	0.118682384
16,000	151987	0.252325535
32,000	303987	0.51361537
100,000	949987	1.66358279
500,000	4,749,987	8.533004693
Algorithm Name: Quick Sort	**Type of list (sorted or unsorted):** Sorted	
List Size	Comparisons	Time (seconds)
1,000	1500	0.001995325
2,000	3000	0.00398922
4,000	6000	0.008959055
8,000	12000	0.017952204
16,000	24000	0.040890217
32,000	48000	0.085768938
100,000	150000	0.285238743
500,000	750000	1.740348816
Algorithm Name: Bubble Sort	**Type of list (sorted or unsorted):** Sorted	
List Size	Comparisons	Time (seconds)
1,000	499500	0.054882765

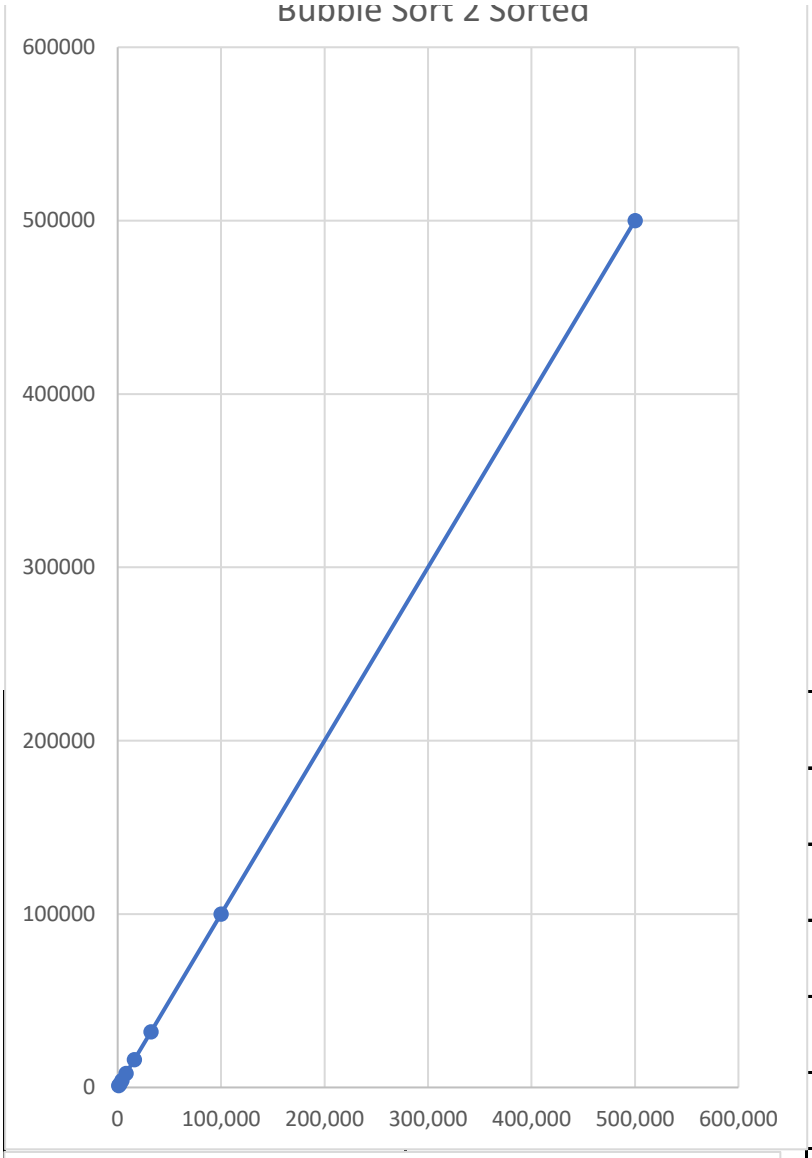
2,000	1999000	0.384944677
4,000	7998000	1.298999071
8,000	31996000	4.727323532
16,000	127992000	19.35224652
32,000	511984000	82.82352614
100,000	4999950000	264.896219
500,000	1.25E+11	6,605.99
Algorithm Name: Bubble Sort 2	**Type of list (sorted or unsorted):** Sorted	
List Size	Comparisons	Time (seconds)
1,000	999	0
2,000	1999	0.001991749
4,000	3999	0.001005173
8,000	7999	0.000997305
16,000	15999	0.002991676
32,000	31999	0.005835533
100,000	99999	
500,000	499999	
Algorithm Name: Merge Sort	**Type of list (sorted or unsorted):** Sorted	
List Size	Comparisons	Time (seconds)
1,000	9976	0.003044605
2,000	21952	0.005984545
4,000	47904	0.013013601
8,000	103808	0.033909559

16,000	223616	0.064824819
32,000	479232	0.142617702
100,000	1668928	0.472735404
500,000	9475712	2.891264677





Bubble Sort 2 Sorted


Bubble Sort 2 Sorted
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500000
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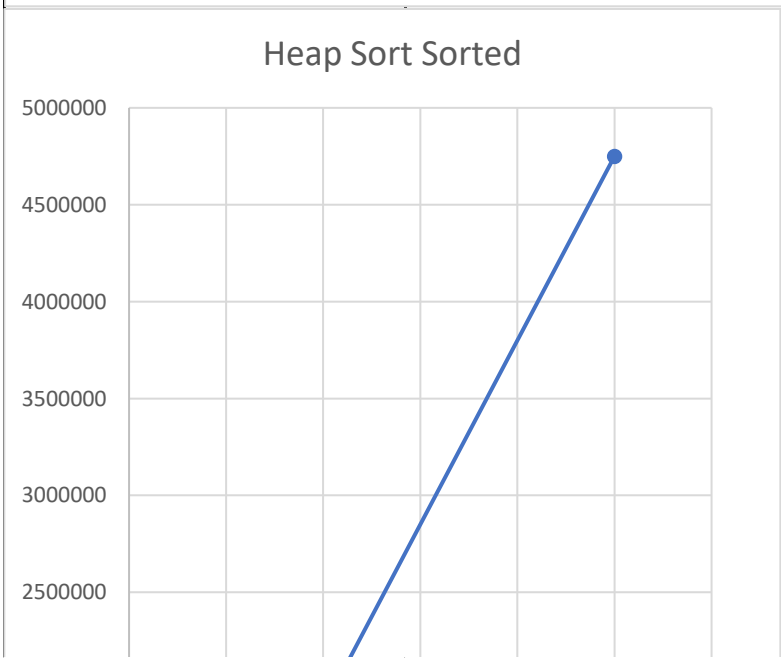
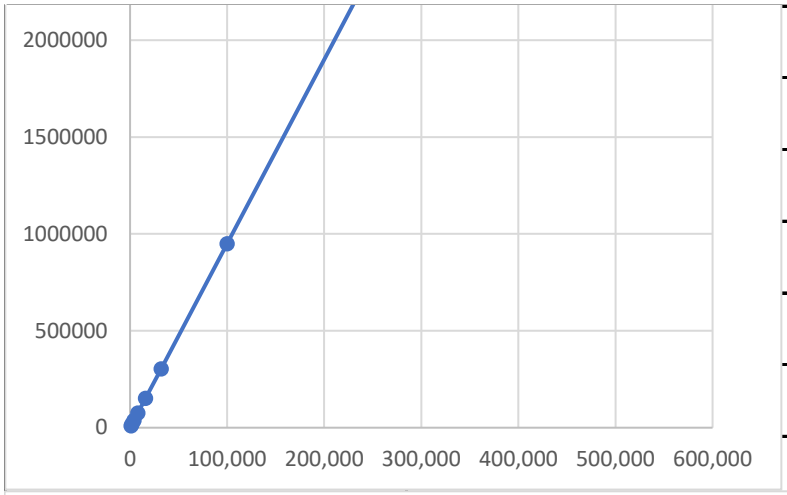
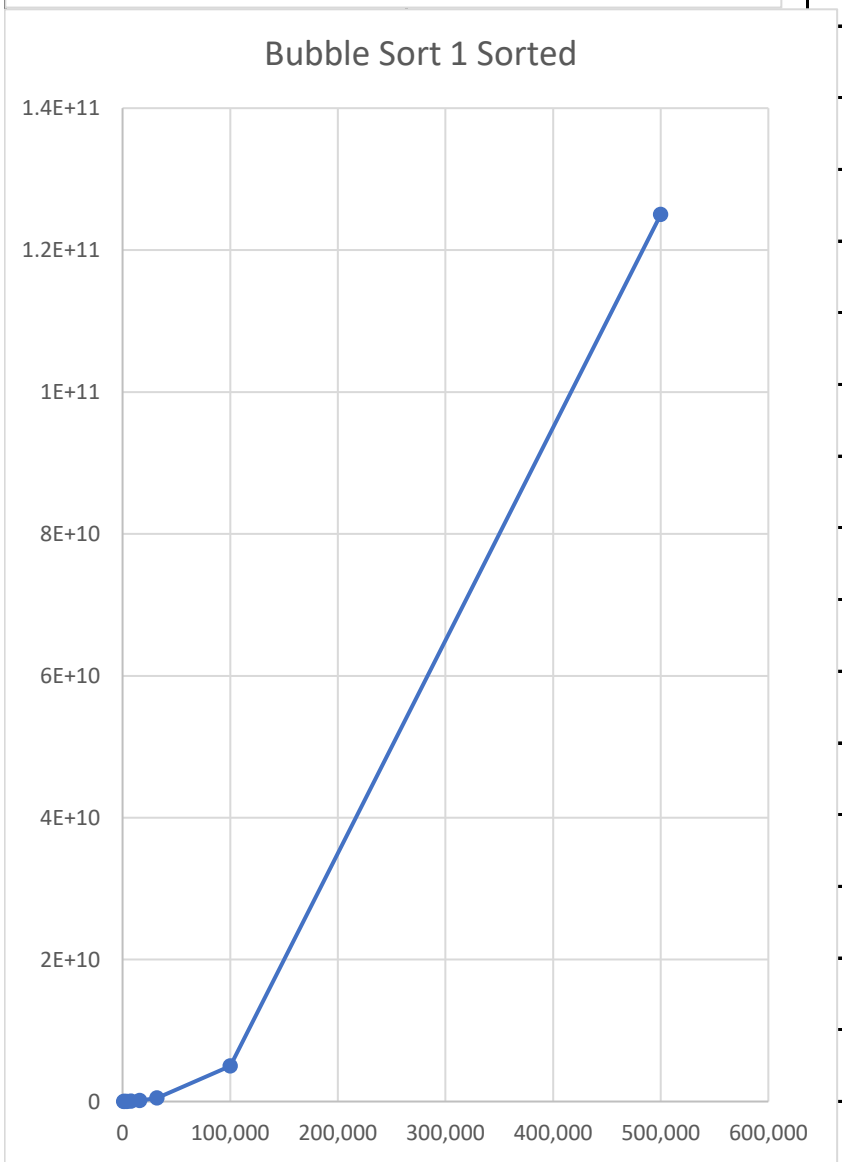
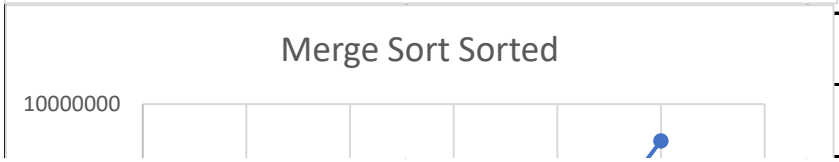
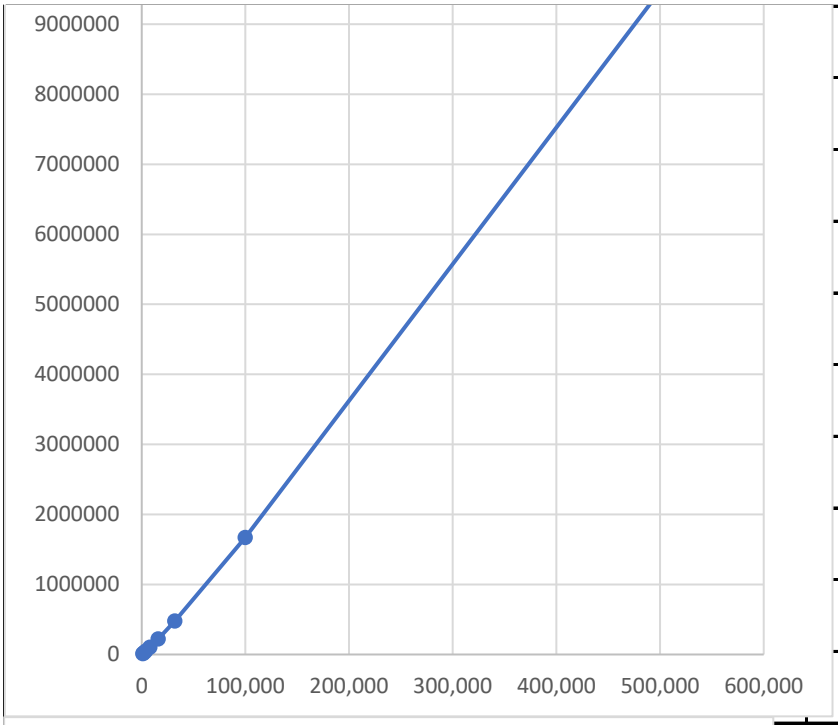
300000
200000
100000
0
0
100,000
200,000
300,000
400,000
500,000
600,000

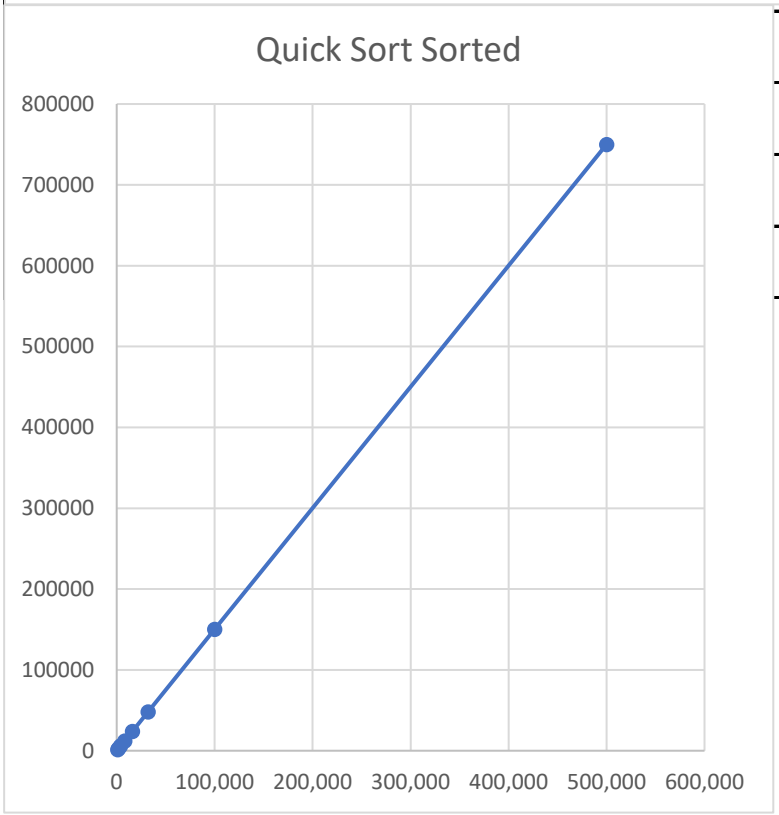

Heap Sort Sorted
5000000
4500000
4000000
3500000
3000000
2500000


2000000
1500000
1000000
500000
0
0
100,000
200,000
300,000
400,000
500,000
600,000


Bubble Sort 1 Sorted
1.4E+11
1.2E+11
1E+11
8E+10
6E+10
4E+10
2E+10
0
0
100,000
200,000
300,000
400,000
500,000
600,000


Merge Sort Sorted
10000000


9000000
8000000
7000000
6000000
5000000
4000000
3000000
2000000
1000000
0
0
100,000
200,000
300,000
400,000
500,000
600,000


Quick Sort Sorted
800000
700000
600000
500000
400000
300000
200000
100000
0
0
100,000
200,000
300,000
400,000
500,000
600,000