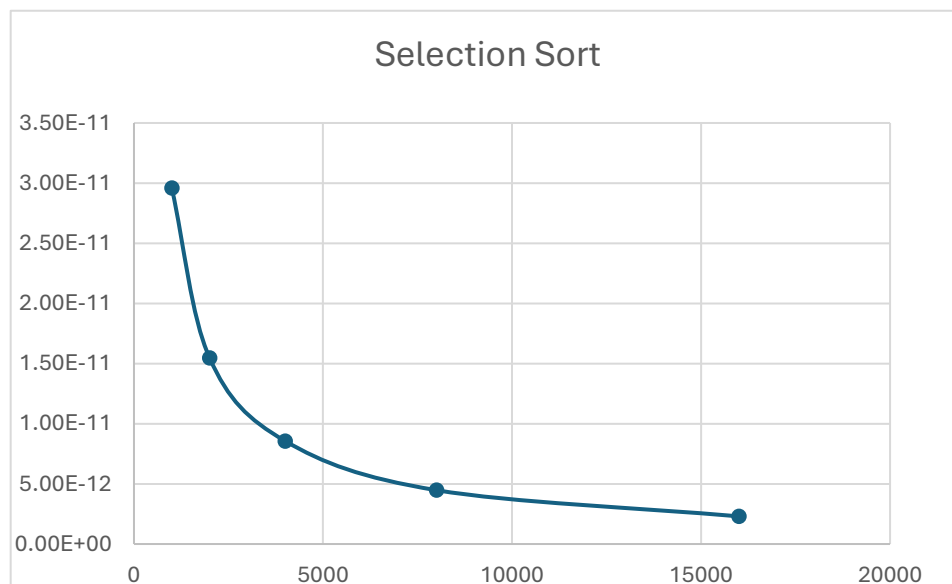
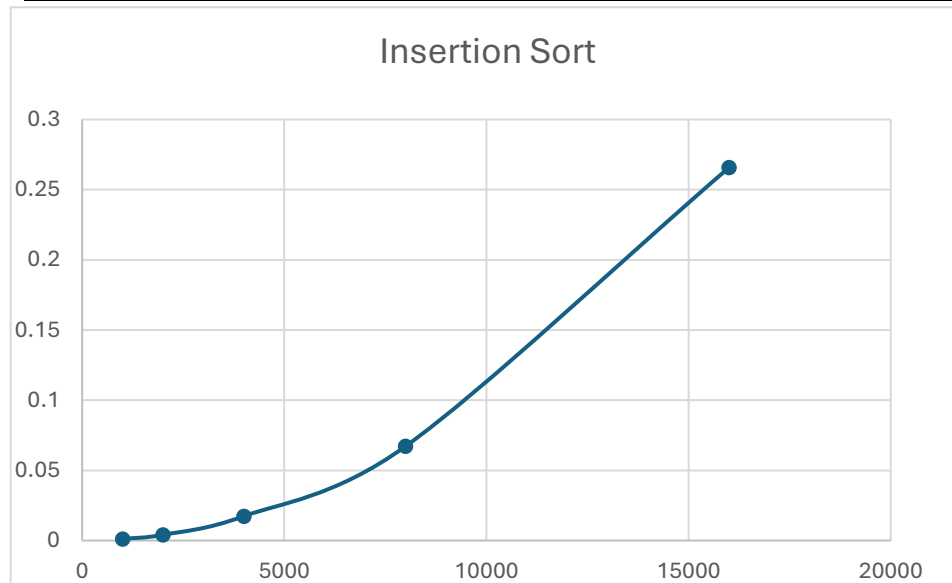


Insertion Sort				
N	Average Time (t_avg)	RUNS	N^2	t_avg / N^2
1000	0.00114	1024	1000000	1.14E-09
2000	0.004102	1024	4000000	1.03E-09
4000	0.017376	512	16000000	1.09E-09
8000	0.067181	256	64000000	1.05E-09
16000	0.265797	128	256000000	1.04E-09
Selection Sort				
N	Average Time (t_avg)	RUNS	N^2	t_avg / N^2
1000	0.00003	1024	1000000	2.96E-11
2000	0.000062	1024	4000000	1.55E-11
4000	0.000137	512	16000000	8.56E-12
8000	0.000286	256	64000000	4.48E-12
16000	0.000589	128	256000000	2.30E-12



These plots show that insertion sort is very quick for smaller amounts of data but as more data is being sorted it becomes exponentially harder to sort. Meaning that the more pieces of data, it will take exponentially longer per data item to be sorted.

Selection Sort is the opposite that the smaller the data set the longer it will take for the item to sort the data. The larger the data set the quicker per piece of data it will be to sort when using selection sort.

Insertion Sort Prediction				
N	Seconds	Minutes	Hours	Days
100000	1.14E+01	1.901E-01	3.168E-03	1.320E-04
1000000	1.03E+03	1.709E+01	2.849E-01	1.187E-02
10000000	1.09E+05	1.810E+03	3.017E+01	1.257E+00
100000000	1.05E+07	1.750E+05	2.916E+03	1.215E+02
1000000000	1.04E+09	1.730E+07	2.884E+05	1.202E+04
Selection Sort Prediction				
N	Seconds	Minutes	Hours	Days
100000	2.96E-01	4.933E-03	8.221E-05	3.426E-06
1000000	1.55E+01	2.578E-01	4.297E-03	1.790E-04
10000000	8.56E+02	1.427E+01	2.378E-01	9.909E-03
100000000	4.48E+04	7.461E+02	1.243E+01	5.181E-01
1000000000	2.30E+06	3.832E+04	6.387E+02	2.661E+01