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Data Structures

CPSC 350

Sorting Test

Sorting(Top) Techniques ------------------ Integers (Column)	Bubble Sort	Insertion Sort	Merge Sort	Quick Sort	Notes
5000	< 1 sec	< 1 sec	< 1 sec	< 1 sec	equal
10000	< 1 sec	< 1 sec	< 1 sec	< 1 sec	equal
50000	< 2 sec	< 7 sec	< 1 sec	< 1 sec	I.S slowed
100000	8 sec	29 sec	< 1 sec	< 1 sec	MS QS(fast)
500000	14 mins 2 sec	3 mins 8 sec	8 sec	3 sec	Bubble Sort slowed
1000000	< 1 hour	14 mins 8 sec	**ERROR**	10 seconds	Merge Crashed

- As the integers increased to respectable sizes the speeds went up as well
- Insertion Sort and Bubble Sort proves to process slowly in a limited time
- Merge Sort and Bubble Sort has shown relatively quick processing speeds to sort integer even when the values increased.
- Merge Sort so crashed after an attempt to process a million integers
- I used a MacBook Pro 2018 for this test so a faster or slower computer may have changed the processing time.