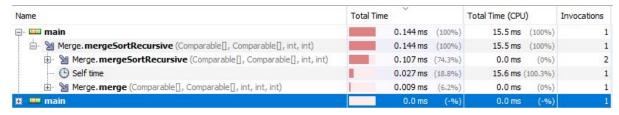*Universidad del Valle de Guatemala*

Estructuras de Datos

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Pruebas con 10 datos

GNOME
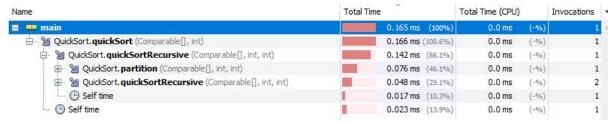
Name	Total Time		Total Time (CPU)		Invocations
main	3.76 ms	(100%)	0.0 ms	(-%)	1
Gnome.gnomeSort (Comparable[])	3.76 ms	(100%)	0.0 ms	(-%)	1
Self time	3.69 ms	(98.2%)	0.0 ms	(-%)	1
Numbers.compareTo (Object)	0.069 ms	(1.8%)	0.0 ms	(-%)	65

MERGE

Name	Total Time		Total Time (CPU)		Invocations
main	0.144 ms	(100%)	15.5 ms	(100%)	1
Merge.mergeSortRecursive (Comparable[], Comparable[], int, int)	0.144 ms	(100%)	15.5 ms	(100%)	1
Merge.mergeSortRecursive (Comparable[], Comparable[], int, int)	0.107 ms	(74.3%)	0.0 ms	(0%)	2
Self time	0.027 ms	(18.8%)	15.6 ms	(100.3%)	1
Merge.merge (Comparable[], Comparable[], int, int, int)	0.009 ms	(6.2%)	0.0 ms	(0%)	1
main	0.0 ms	(-%)	0.0 ms	(-%)	1

QUICK

Name	Total Time		Total Time (CPU)		Invocations
main	0.165 ms	(100%)	0.0 ms	(-%)	1
QuickSort.quickSort (Comparable[], int)	0.166 ms	(100.6%)	0.0 ms	(-%)	1
QuickSort.quickSortRecursive (Comparable[], int, int)	0.142 ms	(86.1%)	0.0 ms	(-%)	1
QuickSort.partition (Comparable[], int, int)	0.076 ms	(46.1%)	0.0 ms	(-%)	1
QuickSort.quickSortRecursive (Comparable[], int, int)	0.048 ms	(29.1%)	0.0 ms	(-%)	2
Self time	0.017 ms	(10.3%)	0.0 ms	(-%)	1
Self time	0.023 ms	(13.9%)	0.0 ms	(-%)	1

RADIX

Name	Total Time		Total Time (CPU)		Invocations
main	2.30 ms	(100%)	0.0 ms	(-%)	1
Radix.bucketPass (Comparable[], int)	2.30 ms	(100%)	0.0 ms	(-%)	1
Self time	1.50 ms	(65.4%)	0.0 ms	(-%)	1
Radix.digit (Comparable, int)	0.799 ms	(34.6%)	0.0 ms	(-%)	11

BUBBLE

Name	Total Time		Total Time (CPU)		Invocations
main	0.136 ms	(100%)	0.0 ms	(-%)	1
Bubble.bubbleSort (Comparable[])	0.137 ms	(100.7%)	0.0 ms	(-%)	1
Numbers.compareTo (Object)	0.070 ms	(51.5%)	0.0 ms	(-%)	55
Self time	0.067 ms	(49.3%)	0.0 ms	(-%)	1

Resultados desordenados

Cantidad de números ordenados	10	100	1000	3000
Gnome	3.76ms	23.8ms	285ms	1831ms
Merge	0.144ms	1.1ms	4.75ms	18.1ms
Quick	0.166ms	0.506ms	7.64ms	41.2ms
Radix	2.3ms	8.68ms	578ms	3518ms
Bubble	0.137ms	1.75ms	263ms	1794ms

Valores Teóricos

Gnome	**O(n*n) -> 100, 10000, 1000000, 9000000**
Merge	**O(nLogn) -> 10, 200, 3000, 10431.36**
Quick	**O(n*n) -> 100, 10000, 1000000, 9000000**
Radix	**O(kn) k = número de bits (int = 32) -> 320, 3200, 32000, 96000**
Bubble	**O(n*n) -> 100, 10000, 1000000, 9000000**

Resultados Ordenados

Sorts	10	100	1000	3000
Gnome	0.067ms	3.87ms	17.4ms	20ms
Merge	0.114ms	14.6ms	6.64ms	13.2ms
Quick	17.2ms	3.8ms	128ms	1744ms
Radix	3.48ms	8.68ms	399ms	4415ms
Bubble	0.087ms	4.17ms	180ms	1720ms

Chart Title