

Evaluation of Sorting Algorithms

CSSE 230

	MergeSort	RadixSort	HeapSort	QuickSort	BubbleSort
Worst case	$O(N \log(N))$	$O(D * N)$	$O(N \log(N))$	$O(N^2)$	$O(N^2)$
Best case	$O(N \log(N))$	$O(D * N)$	$O(N \log(N))$	$O(N \log(N))$	$O(N)$
1 Million sorted	51	78	95	31	3
1 Million reverse sorted	55	70	86	27	inf
1 Million random order	119	66	130	99	inf

Times in milliseconds.

D: number of digits. Notice that if the numbers have many digits but there are comparatively fewer numbers, then the performance will somewhat degrade.