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## Sorting Technique

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\*\* !! THIS IS NOT AN INVENTION !! \*\*

All the fuss for sorting stuff?

It is easy enough to refer to any book on these algorithms to prove inserting into a binary tree is faster than any known sorting algorithm.

I know of the bubble sort, merge sort, and heap sort. These latter two are not much faster than the former one. The bubble sort will take  $n(n-1)/2$  time complexity to sort the array. To retrieve the sorted array,  $n$  iterations.

Well, as luck would have it, inserting into any binary tree (red black tree, splay tree, avl tree, etc) is faster. Sorting will take  $n(\log(n))$  time complexity, and retrieval is again  $n$  iterations..

To prove this, implement a red-black tree and compare using that to sort to any sorting algo.

The tree will win! Sorting 1 million 64-bit items in c++ with a bubble sort will take almost 30 minutes. With a red-black tree, I expect a matter of seconds.

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(My professor from Truman State did not understand)