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Comparison

For us the fastest algorithm was *insertion-sort* followed by *quick-sort* and the by *heap-sort*. As the size of the input increases, the differences in performance becomes more pronounced. While insertion sort and quicksort have the same asymptotic worst case performance (O(n^2)), the average case of quicksort is much faster (O(n*log(n)). Meanwhile, heapsort has the best worst case performance at O(n*logn)). All though for small arrays as well as arrays that are almost already sorted insertion-sort could prove to be more efficient. Quick-sort is the best choice for linked lists. Heap-sort is most efficient for really big and unsorted arrays as it has the best worst case scenario of the three (O(n*log(n)).