Sorting Alorithms

Assignment 6

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The three algorithms that were used in this assignment were quick sort, insertion sort, and bubble sort. The time differences were much more drastic than I expected. When running the program, I assign all three methods to sort through one hundred thousand random numbers. The quick sort took 10 milliseconds (0.010 seconds) to sort. The Insertion sort took 15310 milliseconds (15.310 seconds) to sort. The bubble sort took 34220 milliseconds (34.220 seconds) to sort. Although the quick sort is the fastest sort, it was the most complex out of the three. As a result, this sort would take up the most memory out of the three. The insertion sort is much slower, but is much easier to implement. As a result, it will take up less memory than the quick sort. The bubble sort was the slowest out of all of the sorts. It is very inefficient in most cases. The only case where a bubble sort would be used is when dealing with little data. The choice of programming language did not really affect the results. Whether the sort is programmed in Java or C++, the runtime will be approximately the same.