Chart, line chart

Description automatically generatedChart, line chart

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X axis: number that sorted.

Y axis: time as millisecond.

First graph does not include Bubble Sort and Insertion Sort.

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Best | Average | Worst |
| Merge Sort | n log n | n log n | n^2 |
| Shell Sort | n log n | n^4/3 | n^3/2 |
| Iterative Merge Sort | n log n | n log n | N^2 |
| Quick Sort | n log n | n log n | n^2 |
| Insertion Sort | n | n^2 | n^2 |
| Bubble Sort | n | n^2 | n^2 |

As we can see from the second graph, the Bubble sort and Insertion Sort take much longer than other sorts.

Quick sort is faster sort from these 6 sorts.