C: compares

M: moves

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | **Quick Sort** | **Improvment1: Pivot selection** | **Improvment2: Small Sort** |
| **N=1000** | **Sorted** | C:501499  M: 999 | C: 501499  M: 999 | C: 501457  M: 1000 |
| **Reversed** | C: 751499  M: 250999 | C: 29250  M: 8956 | C: 751522  M: 251020 |
| **Random** | C: 23142  M: 9241 | C: 23991  M: 8031 | C: 24197  M: 9364 |
| **N=10000** | **Sorted** | C: 50014999  M: 9999 | C: 50014999  M: 9999 | C: 50014957  M: 10000 |
| **Reversed** | C: 75014999  M: 25009999 | C: 454947  M: 138386 | C: 75015022  M: 25010020 |
| **Random** | C: 1126498  M: 544423 | C: 1145613  M: 533966 | C: 1127811  M: 544524 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | **Quick Sort** | **Improvment1: Pivot selection** | **Improvment2: Small Sort** |
| **N=10000** | **Sorted** | 187.808 ms. | 196.031 ms. | 196.7 ms. |
| **Reversed** | 637.457 ms. | 2.057 ms. | 473.218 ms. |
| **Random** | 8.023 ms. | 7.276 ms. | 12.097 ms. |
| **N=100000** | **Sorted** | 15587.5 ms. | 15729.7 ms. | 15721.9 ms. |
| **Reversed** | 61565.5 ms. | 41.965 ms. | 47071.9 ms. |
| **Random** | 720.294 ms. | 689.424 ms. | 688.096 ms. |
| **N=200000** | **Sorted** | 887752 ms. | 108271 ms. | 943505 ms. |
| **Reversed** | 279416 ms. | 98.938 ms. | 280968 ms. |
| **Random** | 2714.2 ms. | 2766.55 ms. | 2806.3 ms. |