|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Trial | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | avg |
| MySort | 73 | 70 | 50 | 44 | 45 | 42 | 60 | 51 | 51 | 68 | 63 | 73 | 57.5 |
| MergeSort | 103 | 62 | 24 | 62 | 42 | 25 | 50 | 36 | 37 | 60 | 45 | 30 | 48 |

1. The new sort is slower than the merge sort.
2. I use quick sort for the hybrid method because it is the most efficient sorting algorithm(O(n log n)), especially for sorting this number sequence, it is still considered an in-place sorting method.
3. The reason why it is slower than merge sort is because that the extra steps of sorting the runs in the array instead of just quick sorting it. The checking for runs can be quite expensive. The smaller the run size gets, the more expensive it gets.