## Hw9 Yudi Mao

## The result goes:

Elapsed time of insertion sort of length 10000 random array is:28 Elapsed time of merge sort of length 10000 random array is:6 Elapsed time of quick sort of length 10000 random array is:3 Elapsed time of heap sort of length 10000 random array is:33

Elapsed time of insertion sort of length 20000 random array is:82 Elapsed time of merge sort of length 20000 random array is:2 Elapsed time of quick sort of length 20000 random array is:0 Elapsed time of heap sort of length 20000 random array is:3

Elapsed time of insertion sort of length 30000 random array is:120 Elapsed time of merge sort of length 30000 random array is:2 Elapsed time of quick sort of length 30000 random array is:1 Elapsed time of heap sort of length 30000 random array is:3

Elapsed time of insertion sort of length 40000 random array is:209 Elapsed time of merge sort of length 40000 random array is:5 Elapsed time of quick sort of length 40000 random array is:1 Elapsed time of heap sort of length 40000 random array is:6

Elapsed time of insertion sort of length 50000 random array is:335 Elapsed time of merge sort of length 50000 random array is:4 Elapsed time of quick sort of length 50000 random array is:1 Elapsed time of heap sort of length 50000 random array is:3

Elapsed time of insertion sort of length 60000 random array is:394 Elapsed time of merge sort of length 60000 random array is:7 Elapsed time of quick sort of length 60000 random array is:1 Elapsed time of heap sort of length 60000 random array is:4

Elapsed time of insertion sort of length 70000 random array is:524 Elapsed time of merge sort of length 70000 random array is:3 Elapsed time of quick sort of length 70000 random array is:2 Elapsed time of heap sort of length 70000 random array is:4

Elapsed time of insertion sort of length 80000 random array is:682 Elapsed time of merge sort of length 80000 random array is:4 Elapsed time of quick sort of length 80000 random array is:2 Elapsed time of heap sort of length 80000 random array is:5

Elapsed time of insertion sort of length 90000 random array is:865 Elapsed time of merge sort of length 90000 random array is:5 Elapsed time of quick sort of length 90000 random array is:1

## Elapsed time of heap sort of length 90000 random array is:6

Elapsed time of insertion sort of length 100000 random array is:1114 Elapsed time of merge sort of length 100000 random array is:9 Elapsed time of quick sort of length 100000 random array is:2 Elapsed time of heap sort of length 100000 random array is:7

