## LAB4: QUICK SORT

Input:

```
if __name__ == '__main__':
    array = [67, 83, 34, 56, 12, 89]
    size= len(array)
    quicksort(array, 0, size-1)
```

**Output:** 

```
Sorted array is:
12 34 56 67 83 89
```

## Time complexity graph:

```
Quicksortsort Sorted 1000 Elements in 0.002956399926915765 s
Quicksortsort Sorted 2000 Elements in 0.00802589999511838 s
Quicksortsort Sorted 3000 Elements in 0.009137199958786368 s
Quicksortsort Sorted 4000 Elements in 0.01447209995239973 s
Quicksortsort Sorted 5000 Elements in 0.01786939997691661 s
Quicksortsort Sorted 6000 Elements in 0.0210670999949798 s
Quicksortsort Sorted 7000 Elements in 0.02576660003978759 s
Quicksortsort Sorted 8000 Elements in 0.03012860007584095 s
Quicksortsort Sorted 9000 Elements in 0.03599649993702769 s
Quick Sort Sorted Elements in 0.171875 s
   35
   30
  10
      1000
          2000
               3000
                         5000 6000
                                    7000 8000
                                              9000
                    4000
                        List Length
```