Time Complexity comparison of Sorting Algorithms

| **Algorithm** | **Data Structure** | **Time Complexity** | | |
| --- | --- | --- | --- | --- |
|  |  | **Best** | **Average** | **Worst** |
| [Quick Sort](http://scanftree.com/Data_Structure/Quick-Sort) | Array | O(n log(n)) | O(n log(n)) | O(n^2) |
| [Merge Sort](http://scanftree.com/Data_Structure/Merge-sort) | Array | O(n log(n)) | O(n log(n)) | O(n log(n)) |
| [Heap Sort](http://scanftree.com/Data_Structure/Heap-sort) | Array | O(n log(n)) | O(n log(n)) | O(n log(n)) |
| [Bubble Sort](http://scanftree.com/Data_Structure/bubble-sort) | Array | O(n) | O(n^2) | O(n^2) |
| [Insertion Sort](http://scanftree.com/Data_Structure/Insertion-sort) | Array | O(n) | O(n^2) | O(n^2) |
| [Select Sort](http://en.wikipedia.org/wiki/Selection_sort) | Array | O(n^2) | O(n^2) | O(n^2) |
| [Bucket Sort](http://scanftree.com/Data_Structure/bucket-Sort) | Array | O(n+k) | O(n+k) | O(n^2) |
| [Radix Sort](http://scanftree.com/Data_Structure/radix-sort) | Array | O(nk) | O(nk) | O(nk) |

Space Complexity comparison of Sorting Algorithms

| **Algorithm** | **Data Structure** | **Worst Case Auxiliary Space Complexity** |
| --- | --- | --- |
| [Quick Sort](http://scanftree.com/Data_Structure/Quick-Sort) | Array | O(n) |  |  |
| [Merge Sort](http://scanftree.com/Data_Structure/Merge-sort) | Array | O(n) |  |  |
| [Heap Sort](http://scanftree.com/Data_Structure/Heap-sort) | Array | O(1) |  |  |
| [Bubble Sort](http://scanftree.com/Data_Structure/bubble-sort) | Array | O(1) |  |  |
| [Insertion Sort](http://scanftree.com/Data_Structure/Insertion-sort) | Array | O(1) |  |  |
| [Select Sort](http://en.wikipedia.org/wiki/Selection_sort) | Array | O(1) |  |  |
| [Bucket Sort](http://scanftree.com/Data_Structure/bucket-Sort) | Array | O(nk) |  |  |
| [Radix Sort](http://scanftree.com/Data_Structure/radix-sort) | Array | O(n+k) |  |  |