|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Algorithm** | **Data structure** | **Time complexity: Best** | **Time complexity: Average** | **Time complexity: Worst** | **Space complexity: Worst** |
| Quick sort | Array | O(*n* log(*n*)) | O(*n* log(*n*)) | O(*n*2) | O(*n*) |
| Merge sort | Array | O(*n* log(*n*)) | O(*n* log(*n*)) | O(*n* log(*n*)) | O(*n*) |
| Heap sort | Array | O(*n* log(*n*)) | O(*n* log(*n*)) | O(*n* log(*n*)) | O(1) |
| Smooth sort | Array | O(*n*) | O(*n* log(*n*)) | O(*n* log(*n*)) | O(1) |
| Bubble sort | Array | O(*n*) | O(*n*2) | O(*n*2) | O(1) |
| Insertion sort | Array | O(*n*) | O(*n*2) | O(*n*2) | O(1) |
| Selection sort | Array | O(*n*2) | O(*n*2) | O(*n*2) | O(1) |
| Bogo sort | Array | O(*n*) | O (*n* *n*!) | O(∞) | O(1) |