|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sorting  Algorithm | Which  designing  technique  employed  in given  algorithm | Characteristics | | Time Complexity ( Use the most appropriate notation among O, Ω , and Θ to indicate the time efficiency class) | | |
| Stable(Yes/No) | In place(Yes/No | array A of length n that is already sorted in increasing order | array A of length n that is already sorted in decreasing order | random input |
| Bubble Sort |  |  |  |  |  |  |
| Selection Sort |  |  |  |  |  |  |
| Insertion sort |  |  |  |  |  |  |
| Merge Sort |  |  |  |  |  |  |
| Quick Sort |  |  |  |  |  |  |
| Heap sort |  |  |  |  |  |  |