

Introduction to Sorting Algorithm: 48

→ Why do we need sorting?

1) There are social media applications, news applications, even your emails or file managers, where you want things to be arranged according to dates. You want the newest on top & oldest at the end. And this feature uses the method of sorting. And more specifically, sorting based on the date of publishing / modification.

2) The ~~third~~ most useful application is the dictionary. In a dictionary, the words are sorted lexicographically for you to find any word easily.

3) Another easy concept is that of binary search. Searching in a sorted array takes at most $O(\log N)$ time. And when it's not sorted, it can take up to $O(n)$. So, when an array is sorted, it minimizes the effort to find an element. Retrieval becomes much faster.