
Session 22

Strategy 3: Divide-and-Conquer

Lecture Summary

Quicksort is worth at least two classes with detailed performance analysis since it conveniently illustrates many important points both in analysis and in design. Students are encouraged to visit visualization web link to examine algorithm operation.

Quicksort

1. Divide-conquer approach: partition around a *pivot*
2. Quicksort: sort strategy, sort by hand, the recursive algorithm
3. Understanding partitioning
4. Standard algorithm [Sedgwick] with partition detail (see lecture slides)
5. Step-by-step example

Session Exercise

Activity • Study quicksort using visualization links in the course website.

Reading List

 5.2

Keywords

Partition [procedure], pivot [element], split [index or position]