
Session 15

Strategy 2: Decrease-and-Conquer


Lecture Summary

Again, no elaboration on definition and operation of the (by now) familiar insertion sort; focus instead on understanding performance and its consequences. Start with topological sorting to use momentum from previous graph material; use source removal to intro strategy


Introduction to Decrease-and-Conquer

1. Source removal algorithm, intro decrease-conquer
2. What is a decrease-and-conquer solution?
3. Example 2: Decrease-and-Conquer Approach to Sort
 - Strategy and quick review of algorithm operation
 - Insertion sort performance, advantage and applications

Session Exercise

 Exercise 4.2 • 1, 5, 9

Reading List

 4.1–4.2

Keywords

DAG, directed cycle, source [vertex], strongly connected, topological [sort], weakly connected