

Greedy Algorithms — Quick Guide

Principle:

Make locally optimal choices that lead to a global optimum when the problem has the greedy-choice property and optimal substructure.

Problems:

- 1) Merge Intervals — sort by start, extend current interval.
- 2) Erase Overlap — sort by end, keep earliest finishing to maximize count.
- 3) Min Arrows — sort by end, reuse arrow within overlap.
- 4) Jump Game — track farthest reachable index.
- 5) Partition Labels — cut when you reach the last occurrence of seen chars.

Complexities:

Merge/Erase/Arrows: $O(n \log n)$

Jump Game, Partition Labels: $O(n)$