Characterizing Divide-Conquer-Combine

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Applicability

- Brute-force algorithm is taking polynomial time, and designing an improved polynomial time algorithm.

- Independent subproblems at every node of the recurrence tree i.e., typically, no subproblem at one node of the recurrence tree repeats at some other node. (otherwise, we use another design technique: *dynamic programming*)

- Typically suits to non-choice based optimization

Steps involved in applying

- Formulate a recurrence

- Massage the algorithm together with the recurrence relation to achieve the right asyptotic complexity