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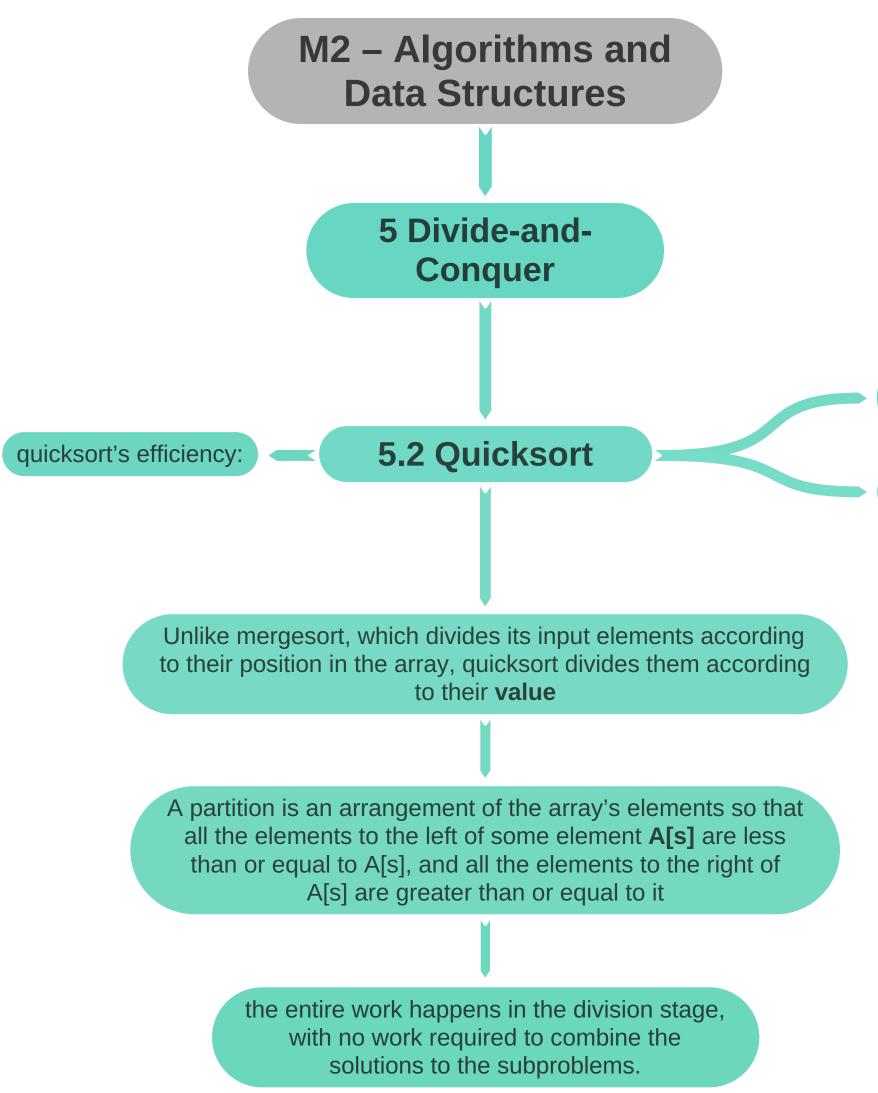
If all the splits happen in the middle of corresponding subarrays, we will have the best case.

Cbest(n) $\in \Theta(n \log 2 n)$;

In the worst case, all the splits will be skewed to the extreme: one of the two subarrays will be empty, and the size of the other will be just 1 less than the size of the subarray being partitioned.

Cworst(n) $\in \Theta(n^2)$.

Cavg(n) \approx 2n ln n \approx 1.39n log2 n.



- divide the array by a center position (HoarePartition);
- 2. during the partition it also sorts the array