

# Divide and Conquer

## Additional Documents

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### Find Median

This folder has problems covering the divide and conquer approach. In this method, you will be dividing the problem into subproblems and then solve the smallest problem.

The problem you will be solving is known as the median problem. In this problem statement, you need to find out the median element of the given array.

For an odd number of elements in the given array, the median value will be  $\text{array}(n/2)$  in a sorted array.

For an even number of elements in the given array the median value will be  $(\text{array}(n-1/2) + \text{array}(n/2) / 2)$  in the sorted array.

**Solution:** This problem will take  $O(n \cdot \log n)$  amount of time. Because first, you need to sort the given array and then calculate the median value for the same.