Both kth largest and smallest 1 in docx in bst.

![Shape

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This is the bst.

Here 3rd smallest is 3 and 3rd largest is 5.

Brute would be just taking a vector store inorder in it and then check the smallest and the largest.

![A picture containing text, clipart

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Inorder of above bst.

Here tc is O(n) and Space complexity is O(n).

Now optimal is.

![Shape

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Take counter as 1 ad in inorder when hit 1 make counter as 2 as counter not equal to k.

Hence for kth smallest:

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Here if k==idx we return as it will not go to right and will just return.

For kth largest:

We go right first then left then we get idx==k.

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