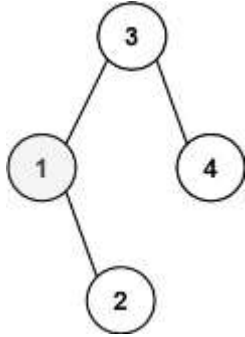


Kth Smallest Element in a BST

Given the root of a binary search tree, and an integer k , return the k^{th} smallest value (**1-indexed**) of all the values of the nodes in the tree.

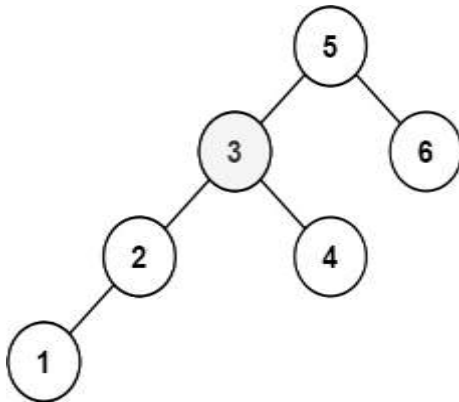
Example 1:



Input: root = [3,1,4,null,2], k = 1

Output: 1

Example 2:



Input: root = [5,3,6,2,4,null,null,1], k = 3

Output: 3

Constraints:

- The number of nodes in the tree is n .
- $1 \leq k \leq n \leq 10^4$
- $0 \leq \text{Node.val} \leq 10^4$