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/**
 * Definition for a binary tree node.
 * public class TreeNode {
 *     int val;
 *     TreeNode left;
 *     TreeNode right;
 *     TreeNode(int x) { val = x; }
 * }
 */
class Solution {
    public int kthSmallest(TreeNode root, int k) {
        Stack<TreeNode> s = new Stack<>();
        traverse(s, root);
        while (!s.isEmpty()) {
            TreeNode node = s.pop();
            k--;
            if (k == 0)
                return node.val;
            traverse(s, node.right);
        }
        return -1;
    }

    private void traverse(Stack<TreeNode> s, TreeNode node) {
        while (node != null) {
            s.push(node);
            node = node.left;
        }
    }
}
```