

Construct BST from Postorder

Given postorder traversal of a Binary Search Tree, you need to construct a BST from postorder traversal. The output will be inorder traversal of the constructed BST.

Example 1:

Input:

```
6
1 7 5 50 40 10
```

Output:

```
1 5 7 10 40 50
```

Explanation:

Testcase 1: The BST for the given post order traversal is:

Thus the inorder traversal of BST is: 1 5 7 10 40 50.

Your Task:

The task is to complete the function **constructTree()** which takes an array `post[]`, size `size` as the argument and returns the root of BST.

Expected Time Complexity: $O(\text{Height of the BST})$

Expected Auxiliary Space: $O(\text{Height of the BST})$

Constraints:

$1 \leq T \leq 100$

$1 \leq N \leq 100$

```
import sys
class Solution:
    def constructTree(self, post, n):
        # code here
        self.idx = n-1
        lo = -sys.maxsize
        hi = sys.maxsize
        return self.helper(post, lo, hi)

    def helper(self, post, lo, hi):
        if self.idx < 0 or post[self.idx] < lo or post[self.idx] > hi:
```

```
return None
```

```
node = Node(post[self.idx])  
self.idx-=1  
node.right = self.helper(post,node.val,hi)  
node.left = self.helper(post,lo,node.val)  
return node
```