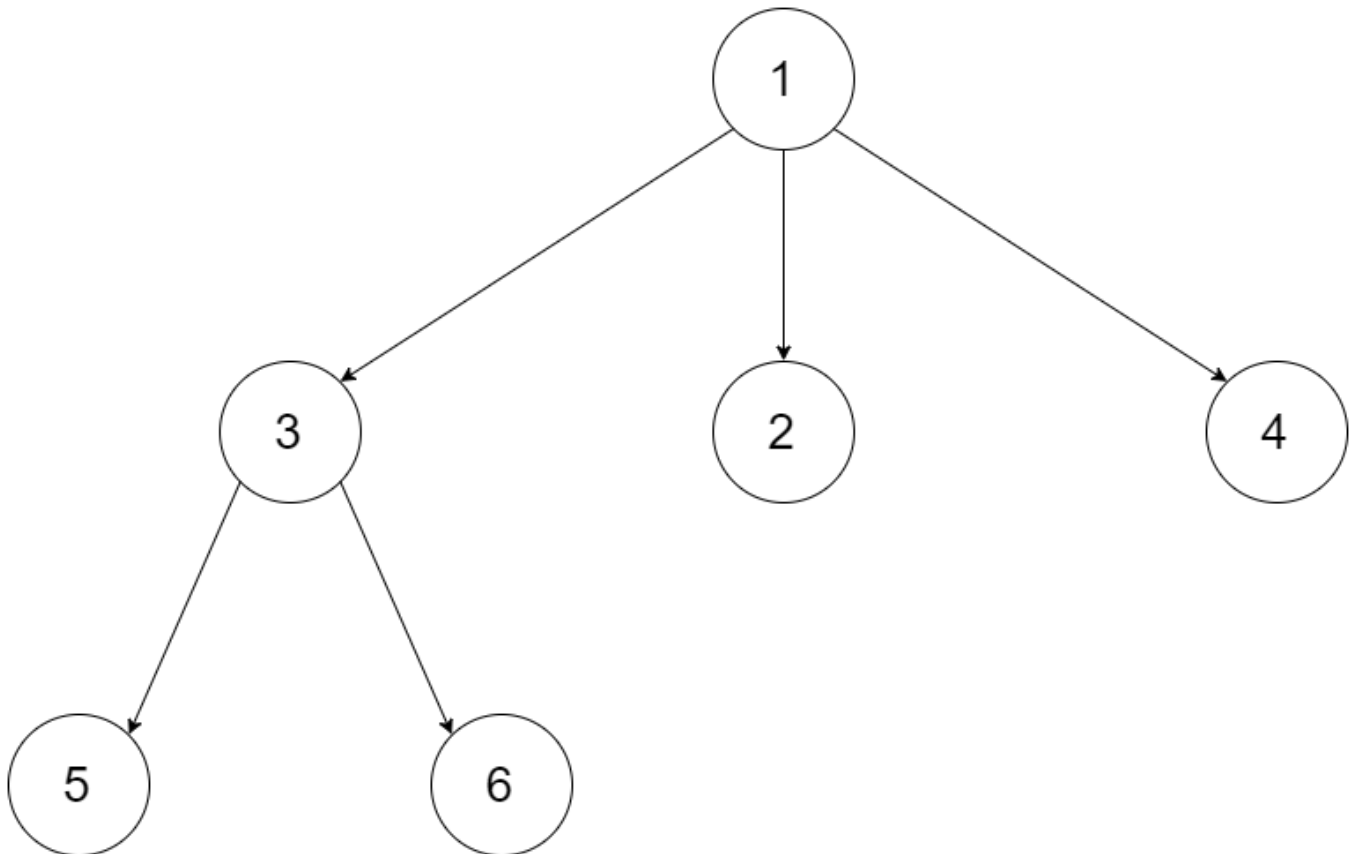


## 589. N-ary Tree Preorder Traversal

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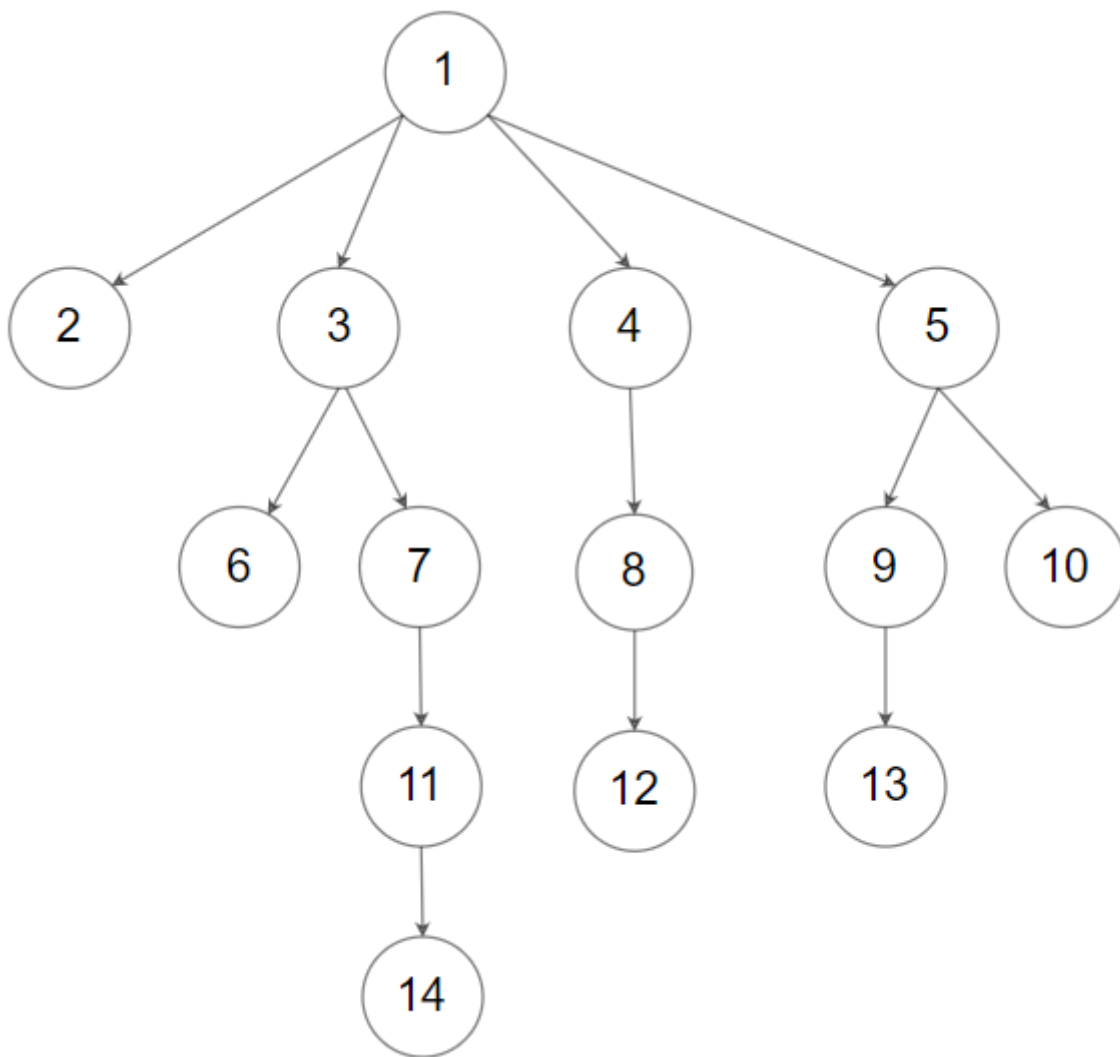
Given the `root` of an n-ary tree, return *the preorder traversal of its nodes' values*.

N-ary-Tree input serialization is represented in their level order traversal. Each group of children is separated by the null value (See examples)



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

**Output:** [1,3,5,6,2,4]



**Input:** root = [1,null,2,3,4,5,null,null,6,7,null,8,null,9,10,null,null,11,null,12,null,13,null,null,14]

**Output:** [1,2,3,6,7,11,14,4,8,12,5,9,13,10]

*#Recursive approach*

```
def preorder(self, root: 'Node') -> List[int]:  
    ans = []
```

```
    self.helper(root,ans)  
    return ans
```

```
def helper(self,root,ans):  
    if root is None:  
        return  
    ans.append(root.val)  
    for nodes in root.children:  
        self.helper(nodes,ans)
```

*#Iterative Approach*

```
def preorder(self, root: 'Node') -> List[int]:
    if not root:
        return []
    ans = []
    ans.append(root)
    res = []

    while ans:
        temp = ans.pop()
        res.append(temp.val)
        ans.extend(reversed(temp.children))
    return res
```