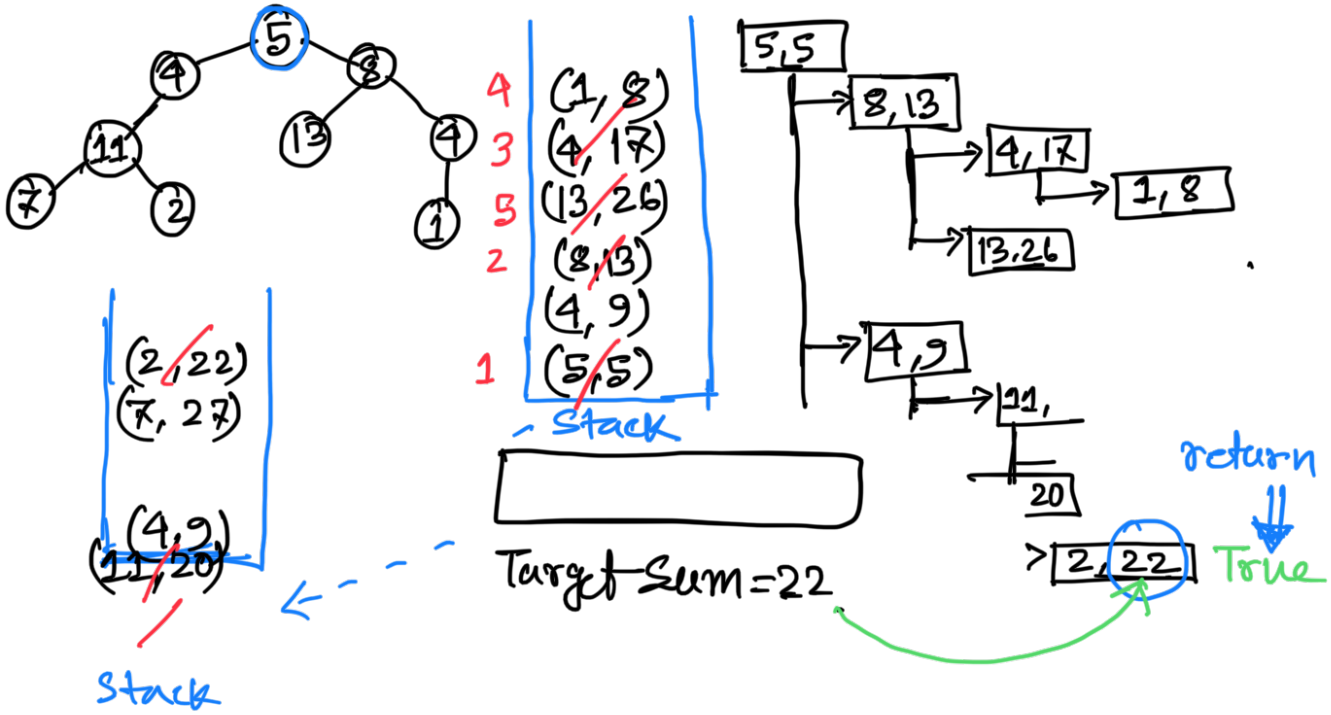
PathSum (Leetcode 112)




```
TreeNode{
    int val;
    TreeNode left;
}   TreeNode right;
```

```
Pair{
    TreeNode node;
    int pathSum;
}
```

```
public boolean hasPathSum(TreeNode root, int targetSum){
    if(root == null) return False;

    Deque<Pair> stack = new ArrayDeque();
    stack.push(new Pair(root, root.val));
    while(! stack.isEmpty()) {
        Pair p = stack.pop();
        TreeNode node = p.node;
        int cumSum = p.pathSum;
        if(node.left==null && node.right==null)
            if(targetSum== cumSum)
                return true;
        if(node.left != null)
            stack.push(new Pair(node.left, cumsum +
                                node.left.val));
        if(node.right != null)
            stack.push(new Pair(node.right, cumsum + node.right
                                .val));
    }
return false; }
```