



Challenge 2: Find kth maximum value in Binary Search Tree

Given the root to a Binary Search Tree and a number "k" write a function to find the kth maximum value in the tree. A solution is placed in the "solution" section for your help, but we would suggest you to solve it on your own first.

We'll cover the following



- Problem Statement
 - Output
 - Sample Input
 - Sample Output
- Coding Exercise

Problem Statement

Implement a function `findKthMax(root, k)` which will take a BST and any number "k" as an input and return kth maximum number from that tree.

Output

Returns kth maximum value from the given tree

Sample Input

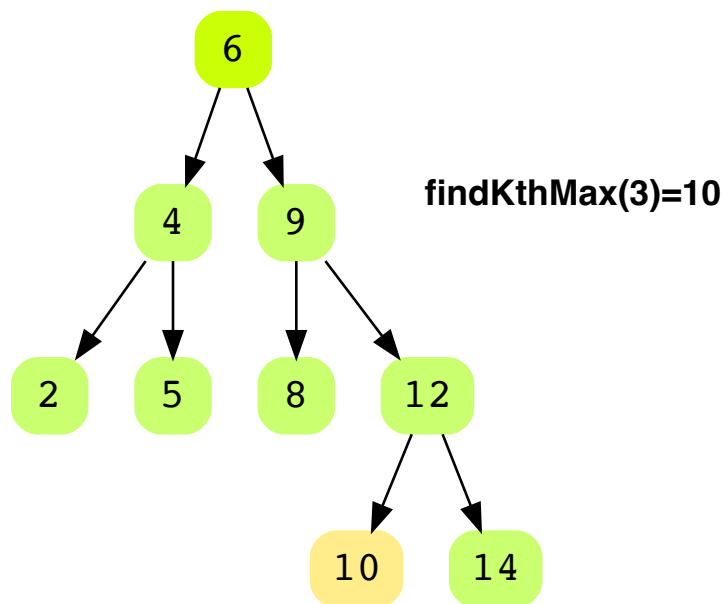


```
bst = {  
    6 -> 4,9  
    4 -> 2,5  
    9 -> 8,12  
    12 -> 10,14  
}  
where parent -> leftChild,rightChild  
  
k = 3
```



Sample Output

10



Coding Exercise

Take a close look and design a step-by-step algorithm first before jumping onto the implementation. This problem is designed for your practice, so try to solve it on your own first. If you get stuck, you can always refer to the solution provided in the solution section. Good Luck!



main.py

BinarySearchTree.py

Node.py

```
from Node import Node
from BinarySearchTree import BinarySearchTree

count = 0
def findKthMax(root, k):
    global count
    if root is None or count < 0:
        return None
    right = findKthMax(root.rightChild, k)
    if right:
        return right
    count = count + 1
    if k == count:
        count = 0
        return root.val
    left = findKthMax(root.leftChild, k)
    if left:
        return left
```

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Solution Review: Find kth maximum v...

☒ Complete

