450. Delete Node in a BST

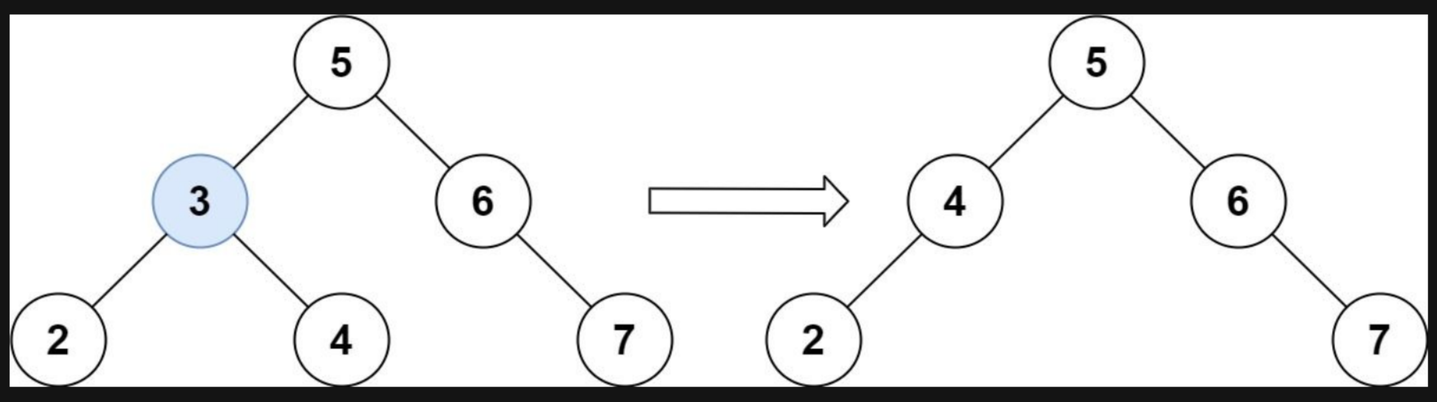
Description

Given a root node reference of a BST and a key, delete the node with the given key in the BST. Return *the* ***root node reference*** *(possibly updated) of the BST*.

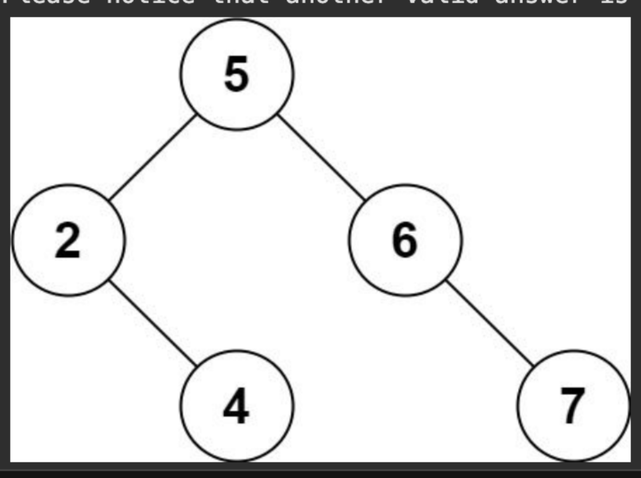
Basically, the deletion can be divided into two stages:

1. Search for a node to remove.
2. If the node is found, delete the node.

Example 1:




```
Input: root = [5,3,6,2,4,null,7], key = 3
Output: [5,4,6,2,null,null,7]
Explanation: Given key to delete is 3. So we find the node with value 3 and delete it.
One valid answer is [5,4,6,2,null,null,7], shown in the above BST.
Please notice that another valid answer is [5,2,6,null,4,null,7] and it's also accepted.
```



Example 2:

```
Input: root = [5,3,6,2,4,null,7], key = 0
Output: [5,3,6,2,4,null,7]
Explanation: The tree does not contain a node with value = 0.
```

Example 3:

```
Input: root = [], key = 0
Output: []
```

Constraints:

- The number of nodes in the tree is in the range `[0, 10^4]`.
- `-10^5 <= Node.val <= 10^5`
- Each node has a **unique** value.
- `root` is a valid binary search tree.
- `-10^5 <= key <= 10^5`

Follow up: Could you solve it with time complexity `O(height of tree)`?