LEETCODE: 669

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669. Trim a Binary Search Tree

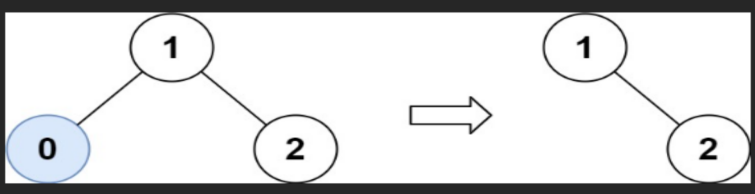
Solved

Medium | Topics | Companies

Given the `root` of a binary search tree and the lowest and highest boundaries as `low` and `high`, trim the tree so that all its elements lies in `[low, high]`. Trimming the tree should **not** change the relative structure of the elements that will remain in the tree (i.e., any node's descendant should remain a descendant). It can be proven that there is a **unique answer**.

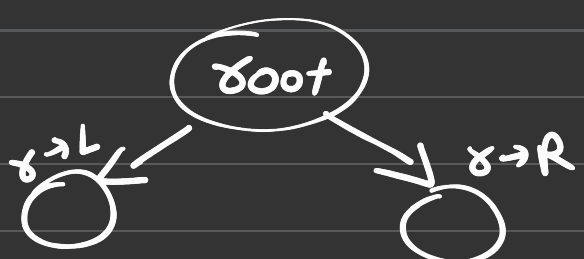
Return *the root of the trimmed binary search tree*. Note that the root may change depending on the given bounds.

Example 1:




```
Input: root = [1,0,2], low = 1, high = 2
Output: [1,null,2]
```

Our approach would be:-



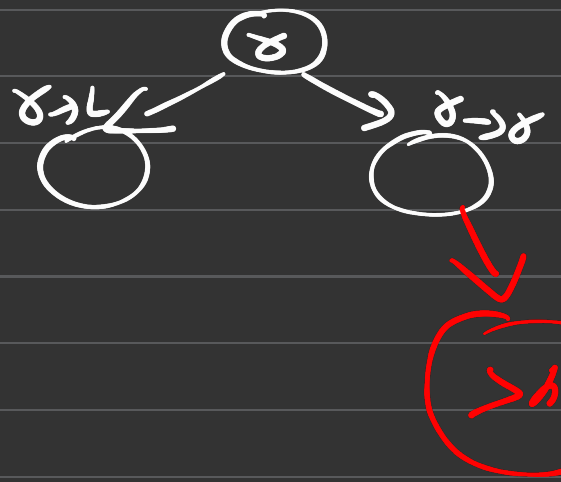
if (root->L < lo)
root->L = root->L->R

↳ Because if root->L is less the lo means root->L->L would be also smaller so remove it

Also if (root->L > hi) means root->L->L would be Also greater to hi so trim it...

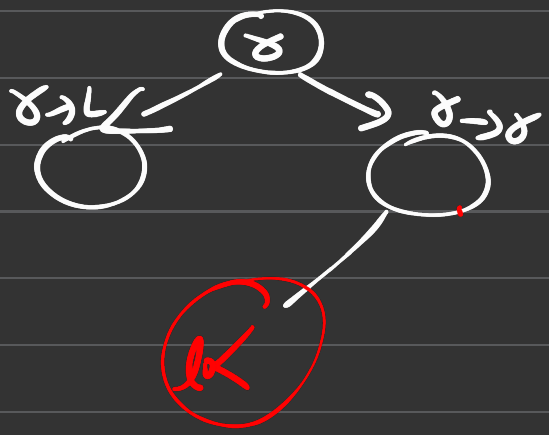
root->L = root->L->L;

Now same conditions for the right side of the root is Also required..!



if(root->R > hi)

root->R = root->R->L




```
if(root->R < 10){
    x->R = x->R->R
}
```

Now the root itself would never be tested itself so we would Attach a dummy node on it