

285. Inorder Successor in BST

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Given a binary search tree and a node in it, find the in-order successor of that node in the BST.

Note: If the given node has no in-order successor in the tree, return `null`.

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```
1 /**
2  * Definition for a binary tree node.
3  * struct TreeNode {
4  *     int val;
5  *     TreeNode *left;
6  *     TreeNode *right;
7  *     TreeNode(int x) : val(x), left(NULL), right(NULL) {}
8  * };
9  */
10
11 //works only for BST
12 class Solution {
13 public:
14     TreeNode* inorderSuccessor(TreeNode* root, TreeNode* p) {
15         if(p==NULL) return NULL;
16         if(p->right!=NULL) {
17             TreeNode* tmp = p->right;
18             while(tmp->left!=NULL) tmp=tmp->left;
19             return tmp;
20         }
21         TreeNode* next=NULL;
22         while(root!=NULL){
23             if(root->val <= p->val){
24                 root = root->right;
25             }
26             else {
27                 next = root;
28                 root = root->left;
29             }
30         }
31         return next;
32     }
33 }
34
35 };
```

Shortcut: Command + enter

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