98. Validate Binary Search Tree

Medium 13.8K 1.1K

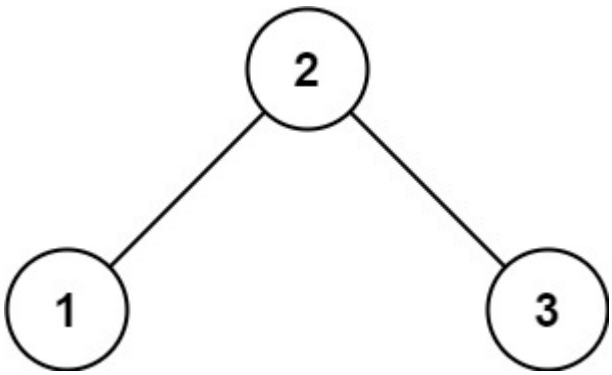
Companies

Given the `root` of a binary tree, *determine if it is a valid binary search tree (BST)*.

A **valid BST** is defined as follows:

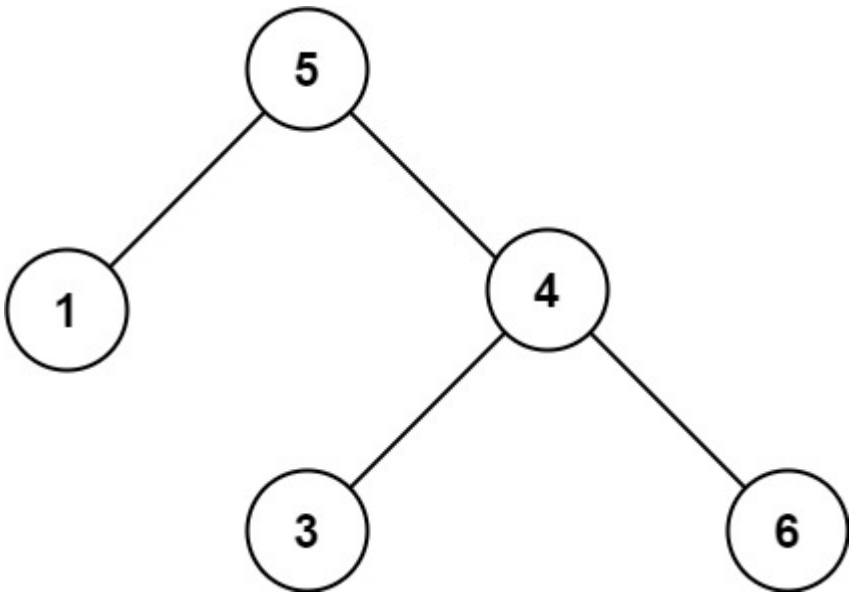
- The left subtree of a node contains only nodes with keys **less than** the node's key.
- The right subtree of a node contains only nodes with keys **greater than** the node's key.
- Both the left and right subtrees must also be binary search trees.

Example 1:




```
Input: root = [2,1,3]
Output: true
```

Example 2:



```
Input: root = [5,1,4,null,null,3,6]
Output: false
Explanation: The root node's value is 5 but its right child's value is 4.
```

Constraints:

- The number of nodes in the tree is in the range $[1, 10^4]$.
- $-2^{31} <= Node.val <= 2^{31} - 1$

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