Write a Python program to check whether a given a binary tree is a valid binary search tree (BST) or not?

class TreeNode(object):

    def \_\_init\_\_(self, x):

        self.val = x

        self.left = None

        self.right = None

def is\_BST(root):

    stack = []

    prev = None

    while root or stack:

        while root:

            stack.append(root)

            root = root.left

        root = stack.pop()

        if prev and root.val <= prev.val:

            return False

        prev = root

        root = root.right

    return True

root = TreeNode(2)

root.left = TreeNode(1)

root.right = TreeNode(3)

result = is\_BST(root)

print(result)

root = TreeNode(1)

root.left = TreeNode(2)

root.right = TreeNode(3)

result = is\_BST(root)

print(result)