Is This a Binary Search Tree?

For the purposes of this challenge, we define a binary tree to be a binary search tree with the following ordering requirements:

- The data value of every node in a node's left subtree is less than the data value of that node.
- The data value of every node in a node's right subtree is greater than the data value of that node.

Given the root node of a binary tree, can you determine if it's also a binary search tree?

Complete the function in your editor below, which has 1 parameter: a pointer to the root of a binary tree. It must return a boolean denoting whether or not the binary tree is a binary search tree. You may have to write one or more helper functions to complete this challenge.

**Input Format**

You are not responsible for reading any input from stdin. Hidden code stubs will assemble a binary tree and pass its root node to your function as an argument.

**Constraints**

- $0 \leq data \leq 10^4$

**Output Format**

You are not responsible for printing any output to stdout. Your function must return true if the tree is a binary search tree; otherwise, it must return false. Hidden code stubs will print this result as a Yes or No answer on a new line.

**Sample Input**

```
3
5 2
1 4 6
```

**Sample Output**

No