

## 108. Convert Sorted Array to Binary Search Tree

Description

Hints

Submissions

Discuss

Solution

Pick One

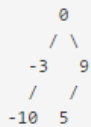
Given an array where elements are sorted in ascending order, convert it to a height balanced BST.

For this problem, a height-balanced binary tree is defined as a binary tree in which the depth of the two subtrees of *every* node never differ by more than 1.

Example:

Given the sorted array: [-10,-3,0,5,9],

One possible answer is: [0,-3,9,-10,null,5], which represents the following height balanced BST:



```
public class L108 {
    public class TreeNode {
        int val;
        TreeNode left;
        TreeNode right;
        TreeNode(int x) { val = x; }
    }

    public TreeNode buildTree(int [] nums, int left, int right) {
        if(left > right) {
            return null;
        }

        int mid = (left + right) / 2;
        TreeNode node = new TreeNode(nums[mid]);

        node.left = buildTree(nums, left, mid - 1);
        node.right = buildTree(nums, left + 1, right);

        return node;
    }

    public TreeNode sortedArrayToBST(int[] nums) {
        return buildTree(nums, 0, nums.length - 1);
    }
}
```

