

Preorder Traversal 2 BST

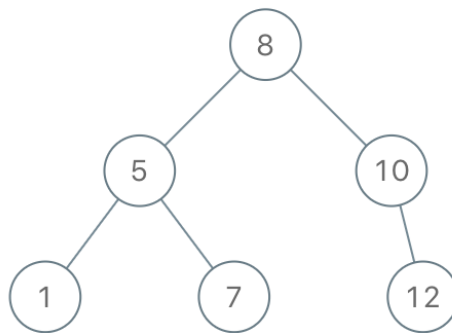
Normally, we can trace the binary search tree by walking through links in the tree. The common techniques to visit all nodes in the tree are preorder, inorder, and postorder traversal. Sometimes we want to create a binary search tree given by the mentioned techniques above.

In class **BSTNode**, implement method:

```
public static BSTNode preorder2BST(int[] preorder)
```

The method will return a root node of a binary search tree which is constructed from a given preorder traversal. In the other meaning, return a root node of a binary search tree that when tracing with preorder traversal technique, the result should be same as preorder array. In case of empty preorder, just return null.

For example, if the preorder array is [8, 5, 1, 7, 10, 12], the binary search tree should be as shown below.



Guarantee that every value in preorder is distinct and the length of preorder is not more than 5000.