

# LEET CODE:105

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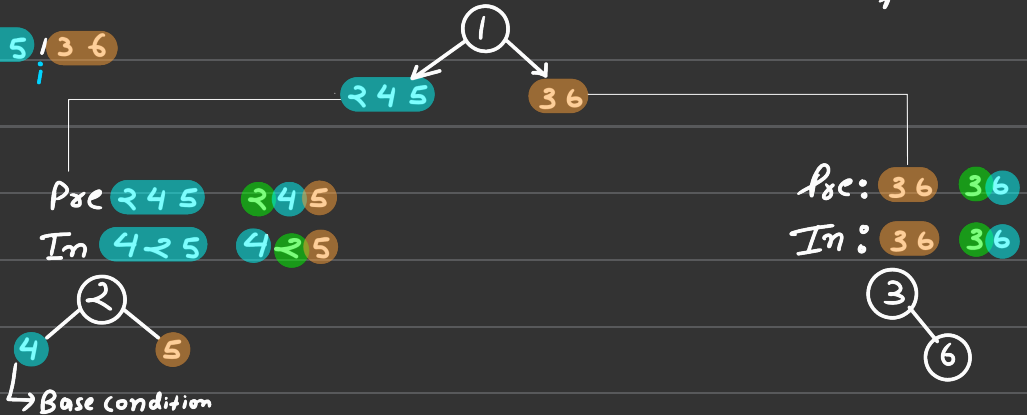
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Pre: 1 2 4 5 3 6    pre ka first element = root of our tree as pre = RLR

In: 4 2 5 3 6



Pre: 2 4 5    2 4 5  
In: 4 2 5    4 2 5

Pre: 3 6    3 6  
In: 3 6    3 6

Base condition  
if  $prelo == prehi$   
or  
 $inlo == inhi$   
return  $newTreeNode(arr[prelo])$   
or  
 $[prehi]$

Coding implementation: (Please dry run at the time of revision)

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class Solution {
public:
    TreeNode* build(vector<int>& pre, int prelo, int prehi, vector<int>& in, int inlo, int inhi) {
        if (inlo > inhi) return NULL;
        TreeNode* root = new TreeNode(pre[prelo]);
        if (prelo == prehi) return root;
        int i = inlo;
        while (i <= inhi) {
            if (in[i] == pre[prelo]) break;
            i++;
        }
        int LeftCount = i - inlo;
        int RightCount = inhi - i;
        root->left = build(pre, prelo+1, prelo+LeftCount, in, inlo, i-1);
        root->right = build(pre, prelo+LeftCount+1, prehi, in, i+1, inhi);
        return root;
    }
    TreeNode* buildTree(vector<int>& pre, vector<int>& in) {
        int n = pre.size();
        return build(pre, 0, n-1, in, 0, n-1);
    }
};
  
```