AlgoExpert Quad Layout C++ 12px Sublime Monok

Prompt Scratchpad Our Solution(s) Video Explanation Run Code

```
Solution 1 Solution 2 Solution 3
```

```
// Copyright © 2020 AlgoExpert, LLC. All rights reserved.
 1
 2
 3
     using namespace std;
 4
 5 ▼ class BST {
 6
     public:
 7
       int value;
       BST *left;
 9
       BST *right;
10
11 ▼
       BST(int value) {
12
         this->value = value;
13
         left = NULL;
        right = NULL;
14
15
       }
16
       // We don't use this method for this solution.
17
       void insert(int value) {
18 ▼
        if (value < this->value) {
19 ▼
20 ▼
           if (left == NULL) {
             left = new BST(value);
21
22 ▼
           } else {
23
             left->insert(value);
24
           }
25 ▼
        } else {
           if (right == NULL) {
26 ▼
             right = new BST(value);
27
           } else {
28 ▼
29
             right->insert(value);
30
31
32
33
     };
34
     BST *constructMinHeightBst(vector<int> array, BST *bst, int startIdx,
35
36
                                int endIdx);
37
     // O(n) time | O(n) space - where n is the length of the array
38
39 ▼ BST *minHeightBst(vector<int> array) {
40
       return constructMinHeightBst(array, NULL, 0, array.size() - 1);
41
     }
42
     BST *constructMinHeightBst(vector<int> array, BST *bst, int startIdx,
43
44 🔻
                                int endIdx) {
       if (endIdx < startIdx)</pre>
45
46
        return NULL;
       int midIdx = (startIdx + endIdx) / 2;
47
       BST *newBstNode = new BST(array[midIdx]);
49 ▼
       if (bst == NULL) {
        bst = newBstNode;
50
51 ▼
      } else {
        if (array[midIdx] < bst->value) {
52
           bst->left = newBstNode;
53
           bst = bst->left;
54
        } else {
55 ▼
56
           bst->right = newBstNode;
           bst = bst->right;
57
58
59
       constructMinHeightBst(array, bst, startIdx, midIdx - 1);
61
       constructMinHeightBst(array, bst, midIdx + 1, endIdx);
62
      return bst;
63
   }
64
```