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1 #include <stdio.h>
2 #define MAX 100
3 struct Node {
4     int data;
5     int left;
6     int right;
7 };
8 struct Node tree[MAX];
9 int nodeCount = 0;
10 int createNode(int data) {
11     tree[nodeCount].data = data;
12     tree[nodeCount].left = -1;
13     tree[nodeCount].right = -1;
14     return nodeCount++;
15 }
16 int search(int inorder[], int start, int end, int value) {
17     for (int i = start; i <= end; i++)
18         if (inorder[i] == value)
19             return i;
20     return -1;
21 }
```

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22 int buildTree(int preorder[], int inorder[], int start, int end, int* preIndex) {
23     if (start > end) return -1;
24     int current = createNode(preorder[*preIndex]);
25     (*preIndex)++;
26     if (start == end)
27         return current;
28     int inIndex = search(inorder, start, end, tree[current].data);
29     tree[current].left = buildTree(preorder, inorder, start, inIndex - 1, preIndex);
30     tree[current].right = buildTree(preorder, inorder, inIndex + 1, end, preIndex);
31     return current;
32 }
33 void printLevelOrder(int rootIndex) {
34     int queue[MAX];
35     int front = 0, rear = 0;
36     queue[rear++] = rootIndex;
37     while (front < rear) {
38         int curr = queue[front++];
39         if (curr == -1) {
40             printf("null ");
41             continue;
42         }
43         printf("%d ", tree[curr].data);
44         queue[rear++] = tree[curr].left;
45         queue[rear++] = tree[curr].right;
46     }
47 }

```

```
48 int main() {
49     int preorder[] = {3, 9, 20, 15, 7};
50     int inorder[] = {9, 3, 15, 20, 7};
51     int n = sizeof(preorder) / sizeof(preorder[0]);
52     int preIndex = 0;
53     int rootIndex = buildTree(preorder, inorder, 0, n - 1, &preIndex);
54     printf("Level order (null shown): ");
55     printLevelOrder(rootIndex);
56     return 0;
57 }
```

Level order (null shown): 3 9 20 null null 15 7
null null null null