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1  /*Author: Bochen (mddboc@foxmail.com)
2  Last Modified: Tue Apr 10 22:28:44 CST 2018*/
3
4  /*
5  Given a binary tree, return the bottom-up level order traversal of its nodes'
  values. (ie, from left to right, level by level from leaf to root).
6
7  For example:
8  Given binary tree [3,9,20,null,null,15,7],
9      3
10     /\
11    9  20
12   /\  /\
13  15 7
14 return its bottom-up level order traversal as:
15 [
16  [15,7],
17  [9,20],
18  [3]
19 ] */
20
21
22 import java.util.ArrayList;
23 import java.util.LinkedList;
24 import java.util.List;
25 import java.util.Queue;
26
27
28 class TreeNode {
29     int val;
30     TreeNode left;
31     TreeNode right;
32
33     TreeNode(int x) {
34         val = x;
35     }
36 }
37
38 public class Test {
39     public static void main(String[] args) {
40
41         TreeNode root = new TreeNode(3);
42         root.left = new TreeNode(9);
43         root.right = new TreeNode(20);
44
45         new Solution().levelOrderBottom(root);
46     }
47 }
48
49 class Solution {
50     public List<List<Integer>> levelOrderBottom(TreeNode root) {
51
52         >>>LinkedList<List<Integer>> result = new LinkedList<>();
53         >>>
54         if (root == null) {
55             return result;
56         }
57
58         Queue<TreeNode> queue = new LinkedList<>();
59
60         queue.add(root);
61
62         while (!queue.isEmpty()) {
63             List<Integer> tempResult = new LinkedList<>();
64             int size = queue.size();
65             for (int i = 0; i < size; i++) {
66                 TreeNode currentNode = queue.poll();
67                 tempResult.add(currentNode.val);
68                 if (currentNode.left != null) {
69                     queue.add(currentNode.left);
70                 }
71                 if (currentNode.right != null) {
72                     queue.add(currentNode.right);

```

```
73 ..... }
74 ..... }
75 ———>——>——>result.addFirst(tempResult);
76 ..... }
77
78 ———>——>return result;
79 ..... }
80 }
```