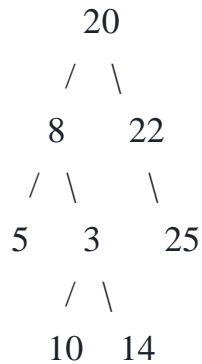


Bottom View of Binary Tree

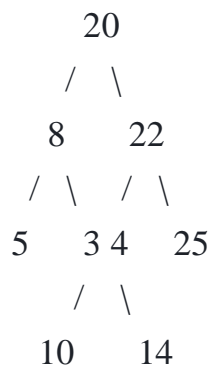
Given a binary tree, print the bottom view from left to right.

A node is included in bottom view if it can be seen when we look at the tree from bottom.



For the above tree, the bottom view is 5 10 3 14 25.

If there are **multiple** bottom-most nodes for a horizontal distance from root, then print the later one in level traversal. For example, in the below diagram, 3 and 4 are both the bottommost nodes at horizontal distance 0, we need to print 4.



For the above tree the output should be 5 10 4 14 25.

Note: The **Input/Output** format and **Example** given are used for the system's internal purpose, and should be used by a user for **Expected Output** only. As it is a function problem, hence a user should not read any input from the stdin/console. The task is to complete the function specified, and not to write the full code.

Example 1:

Input:

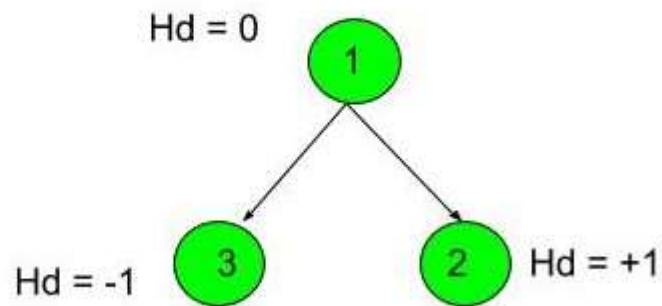
```
    1
   / \
  3   2
```

Output: 3 1 2

Explanation:

First case represents a tree with 3 nodes and 2 edges where root is 1, left child of 1 is 3 and right child of 1 is 2.

Hd: Horizontal distance



Thus nodes of the binary tree will be printed as such 3 1 2.

Example 2:

Input:

```
      10
     /  \
    20   30
   /  \
  40   60
```

Output: 40 20 60 30

Your Task:

This is a functional problem, you **don't** need to care about input, just complete the

function **bottomView()** which takes the root node of the tree as input and returns an array containing the bottom view of the given tree.

Expected Time Complexity: $O(N \cdot \log N)$.

Expected Auxiliary Space: $O(N)$.

Constraints:

$1 \leq \text{Number of nodes} \leq 10^5$

$1 \leq \text{Data of a node} \leq 10^5$