919. Complete Binary Tree Inserter

Description

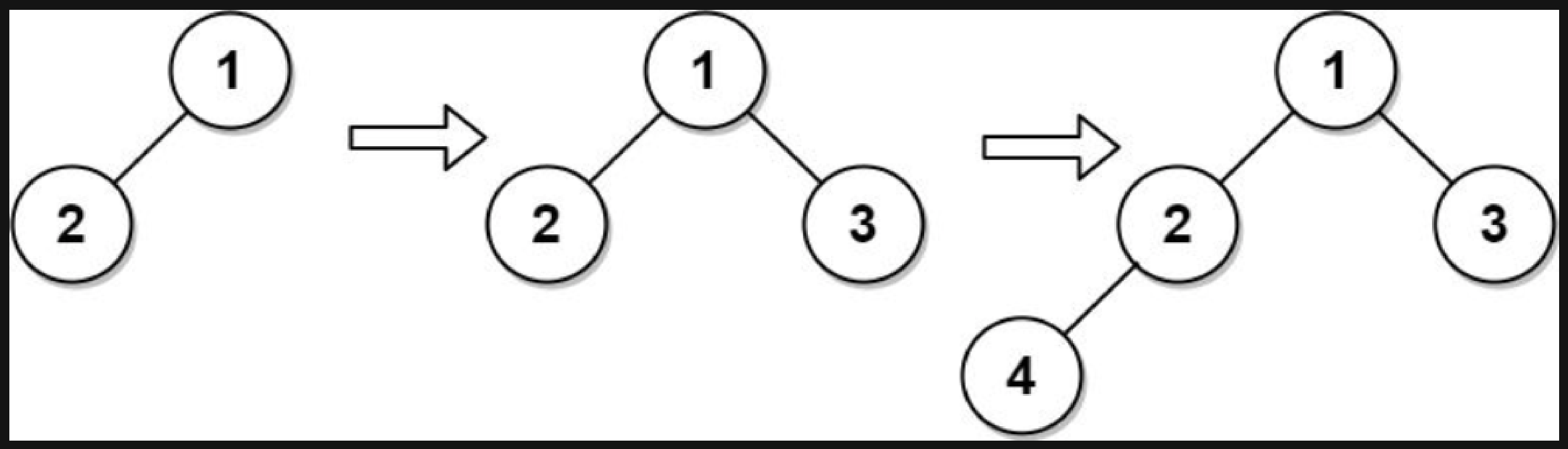
A **complete binary tree** is a binary tree in which every level, except possibly the last, is completely filled, and all nodes are as far left as possible.

Design an algorithm to insert a new node to a complete binary tree keeping it complete after the insertion.

Implement the `CBTInserter` class:

- `CBTInserter(TreeNode root)` Initializes the data structure with the `root` of the complete binary tree.
- `int insert(int v)` Inserts a `TreeNode` into the tree with value `Node.val == val` so that the tree remains complete, and returns the value of the parent of the inserted `TreeNode`.
- `TreeNode get_root()` Returns the root node of the tree.

Example 1:



```
 Input
["CBTInserter", "insert", "insert", "get_root"]
[[[1, 2]], [3], [4], []]
 Output
[null, 1, 2, [1, 2, 3, 4]]

 Explanation
CBTInserter cBTInserter = new CBTInserter([1, 2]);
cBTInserter.insert(3); // return 1
cBTInserter.insert(4); // return 2
cBTInserter.get_root(); // return [1, 2, 3, 4]
```

Constraints:

- The number of nodes in the tree will be in the range `[1, 1000]`.
- `0 <= Node.val <= 5000`
- `root` is a complete binary tree.
- `0 <= val <= 5000`
- At most 10^4 calls will be made to `insert` and `get_root`.