Problem 10: Vertical Order Traversal Of A Binary Tree. Write aprogram for Vertical Order Traversal order of a Binary Tree.

```python
from collections import defaultdict

class TreeNode:

    def___init__(self, key):

        self.key = key

        self.left = None

        self.right = None


def vertical_order_traversal(root):

    if not root:

        return []

    vertical_levels = defaultdict(list)


    queue = [(root, 0)]


    while queue:

        node, level = queue.pop(0)

        vertical_levels[level].append(node.key)


        if node.left:

            queue.append((node.left, level – 1))

        if node.right:

            queue.append((node.right, level + 1))
```

```python
    sorted_levels = sorted(vertical_levels.keys())

    for level in sorted_levels:
        print(*vertical_levels[level])


root = TreeNode(1)

root.left = TreeNode(2)

root.right = TreeNode(3)

root.left.left = TreeNode(4)

root.left.right = TreeNode(5)

root.right.left = TreeNode(6)

root.right.right = TreeNode(7)


vertical_order_traversal(root)
```
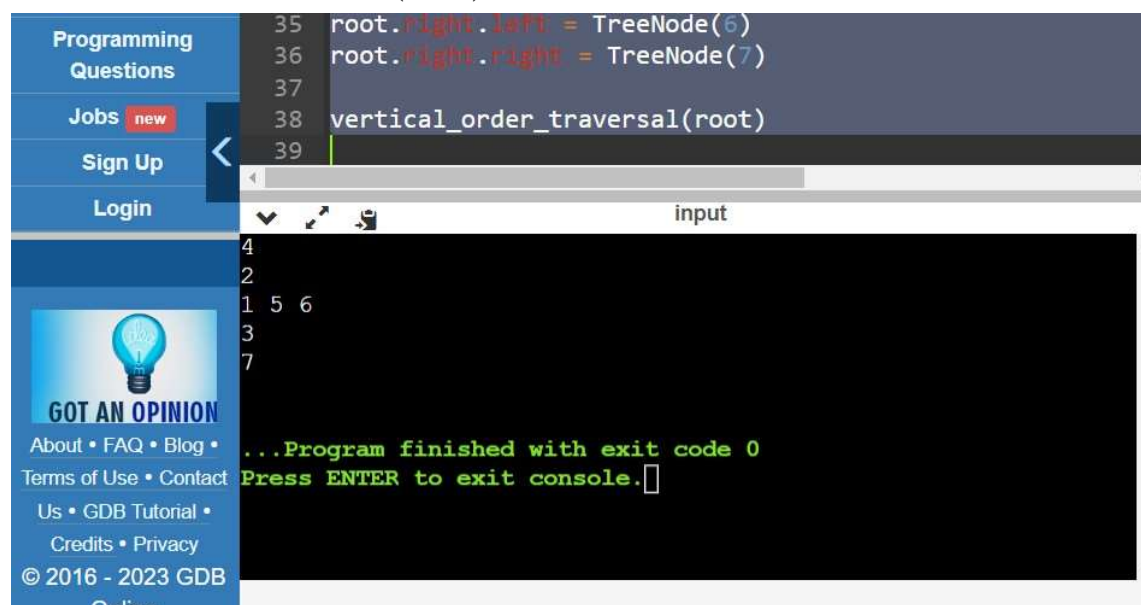
```
35  root.right.left = TreeNode(6)
36  root.right.right = TreeNode(7)
37
38  vertical_order_traversal(root)
39
```

input

```
4
2
1 5 6
3
7

...Program finished with exit code 0
Press ENTER to exit console.
```