

Problem 3: Construct BST from given keys

```
class Node:
```

```
    def __init__(self, key):
```

```
        self.key = key
```

```
        self.left = None
```

```
        self.right = None
```

```
def construct_bst(keys):
```

```
    if not keys:
```

```
        return None
```

```
    root = Node(keys[0])
```

```
    for key in keys[1:]:
```

```
        insert_node(root, key)
```

```
    return root
```

```
def insert_node(root, key):
```

```
    if key < root.key:
```

```
        if root.left:
```

```
            insert_node(root.left, key)
```

```
        else:
```

```
            root.left = Node(key)
```

```
    else:
```

```
        if root.right:
```

```
            insert_node(root.right, key)
```

```
        else:
```

```
            root.right = Node(key)
```

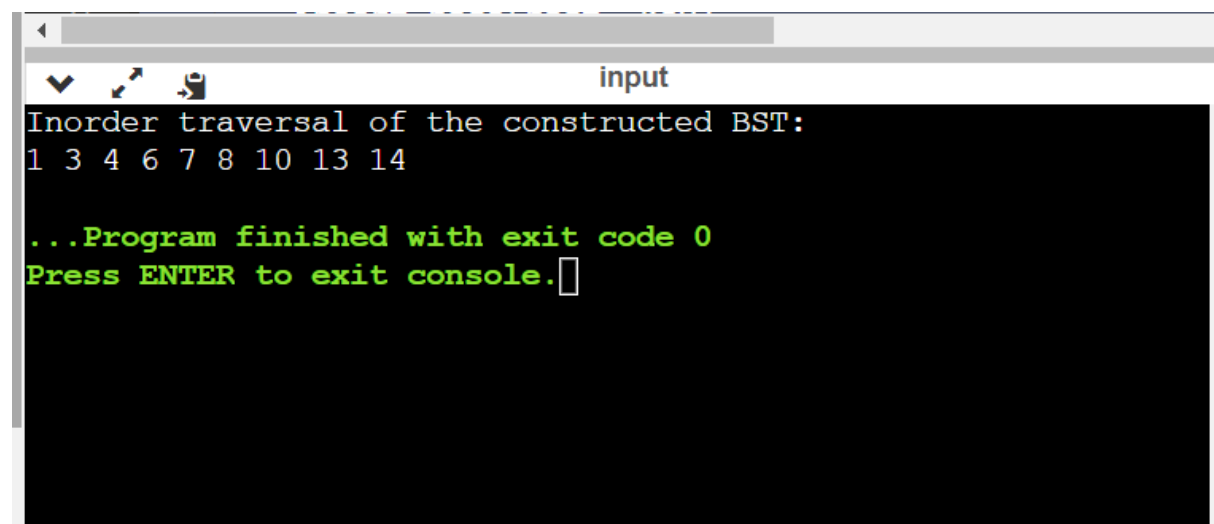
```
def inorder_traversal(node):  
    if node:  
        inorder_traversal(node.left)  
        print(node.key, end=" ")  
        inorder_traversal(node.right)
```

```
keys = [8, 3, 10, 1, 6, 14, 4, 7, 13]
```

```
bst_root = construct_bst(keys)
```

```
print("Inorder traversal of the constructed BST:")
```

```
inorder_traversal(bst_root)
```

A screenshot of a terminal window titled "input". The terminal has a black background with white and green text. The output shows the inorder traversal of a BST constructed from the keys [8, 3, 10, 1, 6, 14, 4, 7, 13]. The output is "Inorder traversal of the constructed BST:" followed by the numbers "1 3 4 6 7 8 10 13 14" on the next line. Below this, it says "...Program finished with exit code 0" and "Press ENTER to exit console." with a cursor. The terminal window has standard OS window controls (minimize, maximize, close) and a scrollbar on the left.

```
input  
Inorder traversal of the constructed BST:  
1 3 4 6 7 8 10 13 14  
  
...Program finished with exit code 0  
Press ENTER to exit console.
```