

Problem 11: Print Root to Node Path In A Binary Tree. Write a program to print path from root to a given node in a binary tree.

```
class Node:
```

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

```
        self.data = data
```

```
        self.left = None
```

```
        self.right = None
```

```
def print_path_to_node(root, target_node):
```

```
    path = path_to_node_helper(root, target_node, [])
```

```
    if path is not None:
```

```
        print("Path from root to node", target_node.data, ": ", end="")
```

```
        for i in range(len(path) - 1):
```

```
            print(path[i].data, "-> ", end="")
```

```
        print(path[-1].data)
```

```
    else:
```

```
        print("Node", target_node.data, "not found in the tree")
```

```
def path_to_node_helper(node, target_node, path):
```

```
    if node is None:
```

```
        return None
```

```
    if node.data == target_node.data:
```

```
        path.append(node)
```

```
    return path
```

```
left_path = path_to_node_helper(node.left, target_node, path)
if left_path is not None:
    left_path.append(node)
    return left_path

right_path = path_to_node_helper(node.right, target_node, path)
if right_path is not None:
    right_path.append(node)
    return right_path

return None
```

```
root = Node(1)
root.left = Node(2)
root.right = Node(3)
root.left.left = Node(4)
root.left.right = Node(5)
root.right.left = Node(6)
root.right.right = Node(7)
```

```
target_node = root.left.right
print_path_to_node(root, target_node)
```

```
target_node = Node(8)
print_path_to_node(root, target_node)
```

Learn Programming

Programming Questions

Jobs new

Sign Up

Login

11 ▾

12

13

14 ▾

15


16

```
for i in range(len(path) - 1):
    print(path[i].data, "-> ", end="")
print(path[-1].data)
else:
    print("Node", target_node.data, "not found in th
```

input

Path from root to node 5 : 5 -> 2 -> 1
Node 8 not found in the tree

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


GOT AN OPINION

[About](#) • [FAQ](#) • [Blog](#) •
[Terms of Use](#) • [Contact](#)
[Us](#) • [GDB Tutorial](#) •
[Credits](#) • [Privacy](#)

© 2018 - 2020 GDB