

Problem 5: Check is a BT is BST or not

class Node:

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

```
    self.value = value
```

```
    self.left = None
```

```
    self.right = None
```

```
def is_bst(node, min_value=float('-inf'), max_value=float('inf')):
```

```
    if node is None:
```

```
        return True
```

```
    if node.value <= min_value or node.value >= max_value:
```

```
        return False
```

```
    return (
```

```
        is_bst(node.left, min_value, node.value) and
```

```
        is_bst(node.right, node.value, max_value)
```

```
)
```

```
root = Node(4)
```

```
root.left = Node(2)
```

```
root.right = Node(6)
```

```
root.left.left = Node(1)
```

```
root.left.right = Node(3)
```

```
root.right.left = Node(5)
```

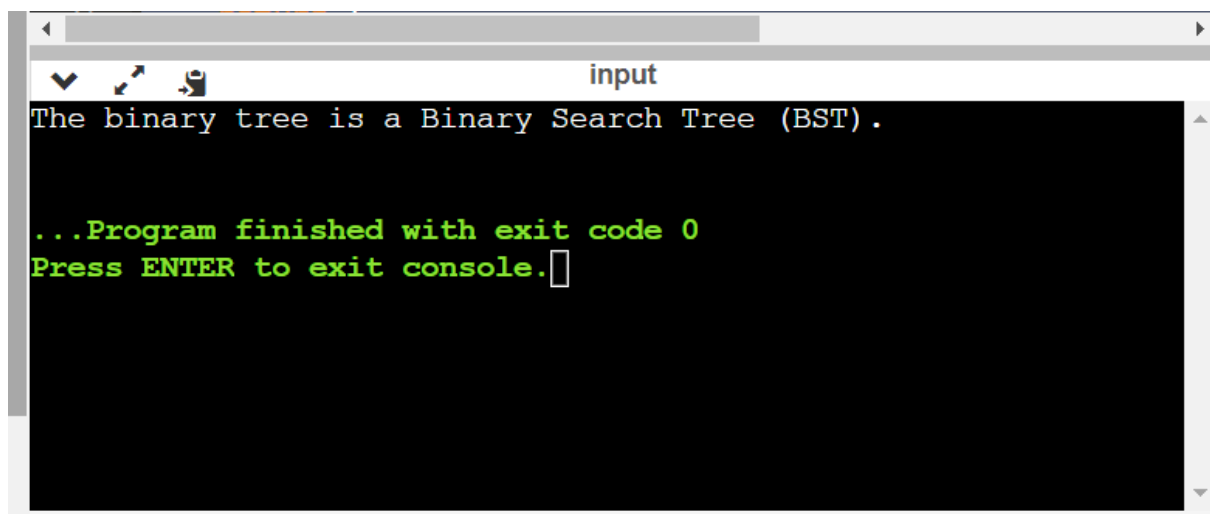
```
root.right.right = Node(7)
```

```
if is_bst(root):
```

```
    print("The binary tree is a Binary Search Tree (BST).")
```

```
else:
```

```
print("The binary tree is not a Binary Search Tree (BST).")
```

A screenshot of a terminal window with a title bar that says "input". The terminal has a black background with white text. The first line of output is "The binary tree is a Binary Search Tree (BST) .". The second line is "...Program finished with exit code 0". The third line is "Press ENTER to exit console." followed by a cursor. The terminal window has standard OS window controls (minimize, maximize, close) and a scrollbar on the right side.

```
input
The binary tree is a Binary Search Tree (BST) .
...Program finished with exit code 0
Press ENTER to exit console.
```