**41.How to implement binary tree using python?**

**Objective:**

* To implement binary tree using python3.

**Process:**

* **Root node:**

Its act like parent for child node.

In this example tree has only one root node.

All child node has been associated with root node.

* **Inserting Node:**

The insert method compares the value of the node to the parent node and decides to add it as a left node or a right node.

**Input:**

* New nodes.

**Output:**

* Binary tree.

**Source code:**

#parent node

class Root:

def \_\_init\_\_(self, data):

self.left = None

self.right = None

self.data = data

#compare the new value with the parent node

def insert(self, data):

if self.data:

if data < self.data:

if self.left is None:

self.left = Root(data)

else:

self.left.insert(data)

elif data > self.data:

if self.right is None:

self.right = Root(data)

else:

self.right.insert(data)

else:

self.data = data

#print the tree

def tree(self):

if self.left:

self.left.tree()

print( self.data)

if self.right:

self.right.tree()

# Use the insert method to add nodes

r = Root(13)

r.insert(23)

r.insert(3)

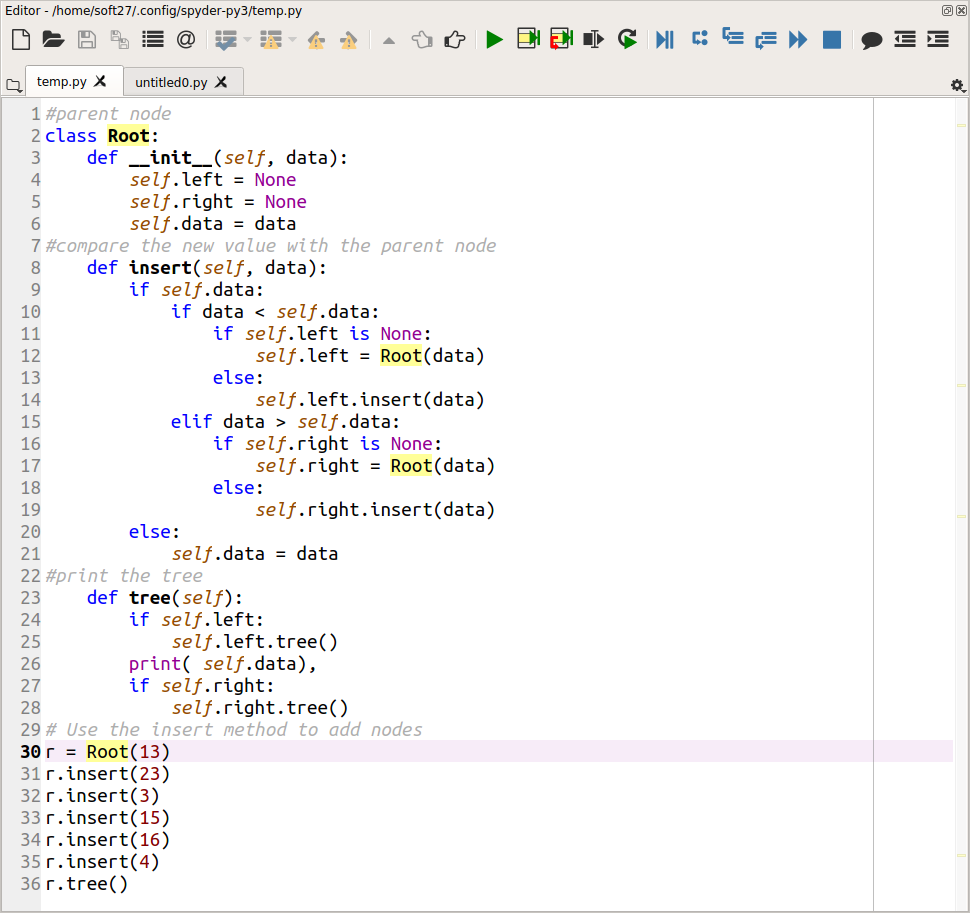
r.insert(15)

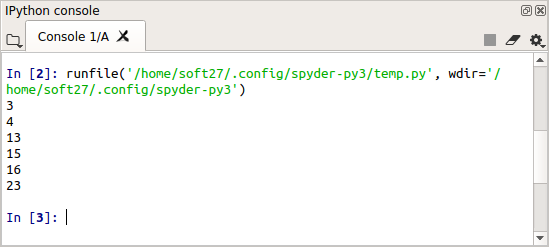
r.insert(16)

r.insert(4)

r.tree()

**Screen shot:**

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