

정보구조 과제 8

독어교육과 2014-19498 정은주

1.

root : Electronics R'Us

internal nodes: Electronic R'Us, Sales, International, Overseas, Manufacturing

siblings of node TV: CD, Tuner

depth of node International: 2

2. 21개

```
In [68]: #problem 3
```

```
In [72]: class Node:
          def __init__(self, value, left = None, right = None):
              self.value = value
              self.left = left
              self.right = right

          def sum_BT(root):
              sum = 0;
              if root is None:
                  return sum
              sum += sum_BT(root.left)
              sum += root.value
              sum += sum_BT(root.right)
              return sum
```

```
In [73]: left = Node(1, Node(2), Node(3))
          right = Node(4, Node(5), Node(6))
          node = Node(7, left, right)
```

```
In [74]: sum_BT(node)
```

```
Out[74]: 28
```

Out[100]: 20

In [81]: *#problem 4*

```
In [101]: root = Node('E')
          root.right = Node('N')
          root.left = Node('X')
          root.left.right = Node('U')
          root.left.left = Node('A')
          root.left.left.left = Node('M')
          root.left.left.right = Node('F')
```

```
In [102]: def preorder(Root):
          order = ""
          if Root is None:
              return order
          order += Root.value
          order += preorder(Root.left)
          order += preorder(Root.right)
          return order
```

In [103]: preorder(root)

Out[103]: 'EXAMFUN'

```
In [106]: def inorder(Root):
          order = ""
          if Root is None:
              return order
          order += inorder(Root.left)
          order += Root.value
          order += inorder(Root.right)
          return order
```

In [107]: inorder(root)

Out[107]: 'MAFXUEN'
