1- Please write a function (using a comprehensible pseudocode syntax) that searches for all parentheses (such as '(', ')', '[', ']', '{', '}') in a given string and checks whether all parentheses are closed properly in the correct order. Function should return index of the first wrong parentheses usage if any exists. If there is no violation it must return -1. And also please finally calculate the worst case time complexity of the function and show the result using big-O notation. Signature of the function would be:

```
public Integer checkParentheses(String mainString) {
...
}


Example1: If mainString="(a+b*[c-d])" the function must return -1;
Example2: If mainString="(a-b/[c*{d+e})])" the function must return 13;
```

2- Please write a function (using a comprehensible pseudocode syntax) that searches for a node in a tree structure. If it finds the node given the code must print out the complete sub-tree structure that lies under the node found. Calculate the worst-case time complexity and present the final complexity using bigO notation.
Signature of the function could be:

```
public class Node {
      public int value;
      public List<Node> children;
}


public void printSubTree(Node rootNode, int valueToSearch,…) {
...
}
```