Program #6: Tree

For this assignment, I want you to create and submit a `Tree.java` file in which you implement a tree class.

1. For this assignment you will be provided with four files.
   - `TreeTest.java` contains the main function. You may NOT modify this file. It creates Tree objects and tests them in multiple ways.
   - `Tree.java` is the template that you may edit to create your class. It contains public and private functions that need to be implemented correctly in order to get the expected output.
   - `Node.java` is a file containing the Node class. Your binary tree in `Tree.java` makes use of the Node objects created from this class. You would be advised to look over it and make yourself familiar with the fields and functions it has.
   - `TreeTest.out` contains the output from my implementation of the Tree class. You would be wise to ensure that your output is EXACTLY the same as mine (i.e. including spacing and formatting)
2. Please note the helpful comments scattered throughout the code (in all three `.java` files). In many cases they provide hints and identify what not to do.
3. Please maintain the names of the different files. You will only be required to submit `Tree.java`.
4. While there are a lot of public and private functions in `Tree.java`, only the public functions will be tested. Feel free to add or remove as many private functions as you think you'll need. The private functions currently in `Tree.java` are only suggestions.
5. Compiling `TreeTest.java` should automatically make use of your `Tree.java` file, which in turn should automatically use the `Node.java` file (assuming they are all in the same directory).
6. While executing the program, feel free to redirect the output to a file of your choosing, and then compare that file with my output file to see any differences.
7. For example, once completed, the three commands below should **NOT** produce any output.

Linux:

```
javac TreeTest.java
java TreeTest > myOutput
diff TreeTest.out myOutput
```

Windows:

```
javac TreeTest.java
java TreeTest > myOutput
fc TreeTest.out myOutput
```