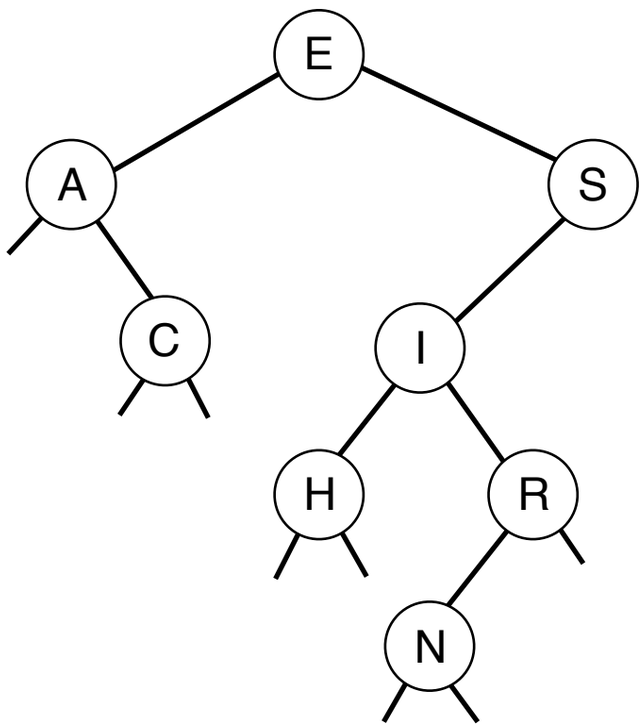
Write a method called validateTree that determines whether a tree is a valid binary tree. Please see the examples below. Notice the links: there is more than one way to get to the node containing H in the example on the right. To be able to test your validateTree method write a method called connectMinMax() that makes the node containing the maximum key the left child of the node containing the minimum key.

Use the code that accompanies this assignment. Do not modify the names of the methods. Do not modify the names of the classes. You may not modify the methods or the data structures in the program. Notice that this code is for a Binary Search Tree. You do not have to validate that the tree is a binary search tree. Just validate that it is a binary tree. I have included code that you do not need for the solution but is for instructional purposes. I suggest that you understand all of the code.

Your validateTree method should be efficient in terms of running time and space. Upload all of the .java files necessary to run your program, a sample output showing that it works, and a brief description of your approach so that I can more easily understand your code. Your code should have some brief comments to help the reader understand your approach and your code. Do not upload any other files (such as directories or class files.)

Your submission will be grade on efficiency (time and space) and understandability..

This is a (binary) tree



This is **not** a (binary) tree