Online on Binary Search Tree + Graphs

Section: A1 + A2 Time: 30 minutes

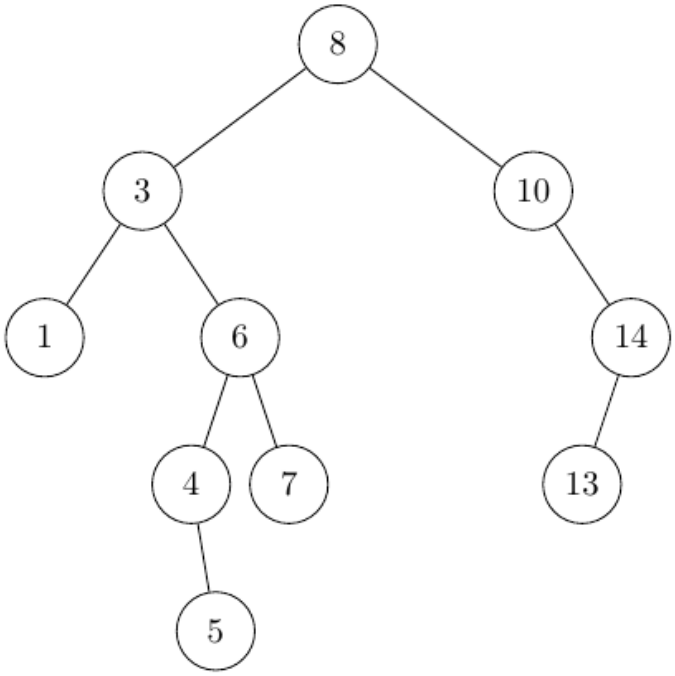
Problem: Find the height of a binary search tree

Add a new function `virtual int height() const = 0;` in your abstract class `BST` in the `BST.hpp` file, which returns the current height of the binary search tree as an integer. Implement the corresponding function in the `ListBST` class in the `listBST.hpp` file. Modify your `main` function in `task1.cpp` to receive the input command `H`, which prints the current height of the tree.

The height is 0 for an empty tree, 1 when the tree consists of the root only, and so on.

Note:

1. You are NOT allowed to modify any other existing function in the ListBST class. However, you may add private helper functions if necessary.
2. You are NOT allowed to include/use any STL functions. However, you are free to use any of the code you used in your Graph assignment.
3. Please refer to `in_a.txt` and `out_a.txt` for sample I/O.



The height of the above binary search tree is 5