CS 11 Data Structures and Algorithms

Assignment 14: Binary Search Trees 2

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Assignment 14.1 [0 points, optional]

No documentation is required on this assignment.

Start with your binaryTree class from the last assignment and add the big-3 to the class. First add private static functions named "copy()" and "clear()". Because these functions are being called from within the class (instead of being called by the client), you won't need separate recursive "copy_aux()" and "clear_aux()" functions. Instead, "copy()" and "clear()" will themselves be recursive. If you write these two functions correctly, your big-3 will be trivial. "copy()" should be a static void function with two treenode* parameters; it assigns a deep copy of the second parameter to the first parameter. It will be called from your copy constructor and from your assignment operator. "clear()" should be a static void function that deallocates the entire binary tree pointed to by its single treenode* argument. It will be called from your destructor and from your assignment operator.

Your score on this assignment will take into consideration your work on both the previous assignment and this assignment.

Submit Your Work

Use the Assignment Submission link to submit your binarytree.h and binarytree.cpp files. No client file or output is required. When you submit your assignment there will be a text field in which you can add a note to me (called a "comment", but don't confuse it with a C++ comment). In this "comments" section of the submission page let me know whether the class works as required.