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3/30/2024

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The Goal of this homework is to implement a Binary Search Tree in C++. To do this we must implement the clear(), find(), findMaximum(),insert(), and remove() functions. The first is the clear() method which is relatively easy. If the node is not null it makes recursive calls to the left and right subtrees, and begins to traverse down them. When it reaches a node that is null it deletes it. The find() function works by checking if a node is NULL then it returns null. Then if the key < node-> or the key value of the current node. Then it goes to the left subtree, else it goes to the right subtree. When key == node-> key then it returns the node. The Find Maximum() simply recursively calls itself and traverses to the rightmost node of the tree. The insert method either goes to the left subtree if key < node-> key or the rightmost subtree if key > node-> key. Once it reaches the bottom of the tree in its appropriate node, then node ==NULL it creates a new node at that position. Finally the remove function. There are 3 cases. Either there are 0 children, 1 child, or 2 children. To handle these we first traverse the list to the node we wish to remove, once we get to the node we wish to remove and both the left and right subtrees are null it removes the node via a temp node.

A screenshot of a computer program

Description automatically generated