

BST Delete Logic

Precondition: We're given a pointer to the node to delete, call it pointer, and that pointer is located in the node's parent.

Four cases

1. Node to delete is a leaf
set pointer to null
delete node
2. Node to delete has only a left subtree
pointer <- delete's left subtree
delete node
3. Node to delete has only a right subtree
pointer <- delete's right subtree
delete node
4. Node to delete has both a left and a right subtree

(1) adjust key - find node with highest key that's not > node to delete
start at node to delete (pointer)
go to its left child (we know it has one)
go to its rightmost child (it may already be the rightmost)
take that key and put into the node to delete

(2) adjust subtree
if the left child was already the rightmost
node to delete's left <- left child's left
if the left child had a rightmost
rightmost's parent's right <- rightmost's left
delete rightmost