Aim-bst height calculation

#include <iostream>

using namespace std;

struct TreeNode {

int key;

TreeNode\* left;

TreeNode\* right;

TreeNode(int k) : key(k), left(nullptr), right(nullptr) {}

};

class BinaryTree {

public:

TreeNode\* insert(TreeNode\* root, int key) {

if (!root)

return new TreeNode(key);

if (key < root->key)

root->left = insert(root->left, key);

else

root->right = insert(root->right, key);

return root;

}

int height(TreeNode\* root) {

if (!root)

return 0;

int leftHeight = height(root->left);

int rightHeight = height(root->right);

return 1 + max(leftHeight, rightHeight);

}

};

int main() {

BinaryTree tree;

TreeNode\* root = nullptr;

root = tree.insert(root, 50);

root = tree.insert(root, 30);

root = tree.insert(root, 70);

root = tree.insert(root, 20);

root = tree.insert(root, 40);

root = tree.insert(root, 60);

root = tree.insert(root, 80);

cout << "Height of the tree: " << tree.height(root) << endl;

return 0;

}