

4. Merge two binary tree.

class Solution {

public:

TreeNode\* mergeTrees (TreeNode\* root1,  
TreeNode\* root2) {

if (root1 == NULL || root2 == NULL)  
return NULL;

if (root1 == NULL)  
return root2;

if (root2 == NULL)  
return root1;

TreeNode\* merged = new TreeNode (root1->val  
+ root2->val);

merged->left = mergeTrees (root1->left,  
root2->left);

merged->right = mergeTrees (root1->right,  
root2->right);

return merged;

}

};

Output:

case 1:

Input -  
root1 =

[1, 3, 2, 5]

root2 =

[2, 1, 3, null, 4, null, 7]

Output -

[3, 4, 5, 5, 4, null, 7]

Expected

[3, 4, 5, 5, 4, null, 7]

Case 2:

Input:

root1 =

[1]

root2 =

[1, 2]

Output:

[2, 2]

Expected:

[2, 2]