

Індивідуальна робота №2
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#include <iostream>

struct TreeNode {
    int val;
    TreeNode* left;
    TreeNode* right;
    TreeNode(int x) : val(x), left(nullptr), right(nullptr) {}
};

TreeNode* invertTree(TreeNode* root) {
    if (root == nullptr) {
        return nullptr;
    }

    TreeNode* temp = root->left;
    root->left = invertTree(root->right);
    root->right = invertTree(temp);

    return root;
}

void printInOrder(TreeNode* root) {
    if (root != nullptr) {
        printInOrder(root->left);
        std::cout << root->val << " ";
        printInOrder(root->right);
    }
}

int main() {
    // Example 1
    TreeNode* root1 = new TreeNode(4);
    root1->left = new TreeNode(2);
    root1->right = new TreeNode(7);
    root1->left->left = new TreeNode(1);
    root1->left->right = new TreeNode(3);
    root1->right->left = new TreeNode(6);
    root1->right->right = new TreeNode(9);

    std::cout << "Original tree (in-order): ";
    printInOrder(root1);
    std::cout << std::endl;

    TreeNode* invertedRoot1 = invertTree(root1);

    std::cout << "Inverted tree (in-order): ";
    printInOrder(invertedRoot1);
    std::cout << std::endl;

    delete root1;
    delete invertedRoot1;

    return 0;
}
```