

## Assignment 4: Binary Tree

~ 11/12 11:59 PM

### **Notification**

The task should be done by yourself, and you can't use codes from Internet or anyone else. If you don't follow this rule, we will give you 0 score and there can be other disadvantages like F grade.

### **Exam Guide**

1. This test will be conducted in Groom and scoring results will not be released until 11/15.
2. A perfect score is 100 points
3. Each question will be scored with multiple test cases and scored based on the number of passed test cases.
4. Please keep the submission deadline.
5. Please read notification about assignment on I-campus before start your assignment.

### **Problem Lists**

**Problem 1. 40 pts**

**Problem 2. 60 pts**

## Problem 1

Find Postorder

Score: 40pts

We learned three typical tree search methods in the binary tree class. One is Inorder traversal, one is preorder traversal, and one is postorder traversal. What we should note is that you can know the other with just one of them.

As you may have noticed in the title, this task is to find the postorder with only inorder and preorder.

➤ **Input**

- First line: The number of nodes in the tree: **N. ( $0 < N < 1000$ )**
- Second line: The result of preorder traversing a binary tree
- Third line: The result of inorder traversing the same binary tree
- The value of each node is natural number **M. ( $0 < M < N * 10$ )**

➤ **Output**

*post*

- Result of searching binary tree with ~~pre~~order

Sample Input 1

3 1 2 3 2 1 3	<del>1 2 7</del> <i>2 3 1</i>
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Sample Output 1

Sample Input 2

7 1 2 3 4 5 6 7 3 2 4 1 6 5 7	3 4 2 6 7 5 1
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Sample Output 2

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