

CS69201: Computing Lab-1
Take Home Assignment - Tree
August 13, 2024

===== Instructions =====

1. In the case of user input assume only valid values will be passed as input.
2. You can use C or C++ as the programming language. **However, you are not allowed to use any STL libraries in C++**
3. Regarding Submission: Create a single c/cpp file. -> <rollno>_Q1.c. Create a zip file in the name <rollno>_A3_Takehome.zip and submit it to Moodle. For example, if your roll number is 24CS60R15, then your file name will be 24CS60R15_Q1.c and your zip file name will be 24CS60R15_A3_Takehome.zip.
4. **Inputs should be taken from a file and outputs should be printed to a file named output.txt. The input file name will be passed as a command line argument. Not using the proper files for i/o will incur penalty**
5. You have been provided a boilerplate code. You may use it according to your requirements.

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Question 1:

From the preorder and inorder of a tree, construct the tree and print the height and postorder of the tree.

Note:

1. We are doing **Binary tree** here, not BST
2. In the file input assume the first will be inorder and the second will be preorder

Sample input format:

N
N length inorder
N length preorder

Sample Input:

5
9 3 15 20 7
3 9 20 15 7

Sample Output:

Postorder: 9 15 7 20 3

Height: 2