

National Institute of Technology, Calicut
Department of Computer Science and Engineering
Monsoon2021
CS2092D – PROGRAMMING LABORATORY (MCA-I A)
Assignment-7

Policies for Submission and Evaluation

You must submit your assignment on the moodle (Eduserver) course page on or before the submission deadline. Also, ensure that your programs in the assignment must compile and execute without errors in Athena server. During the evaluation your uploaded programs will be checked in Athena server only. Failure to execute programs in the assignment without compilation errors may lead to zero marks for that program.

Your submission will also be tested for plagiarism by automated tools. In case your code fails to pass the test, you will be straightaway awarded zero marks for this assignment and considered by the examiner for awarding F grade in the course. Detection of ANY malpractice regarding the lab course will also lead to awarding an F grade.

Naming Conventions for Submission

Submit a single ZIP (.zip) file (do not submit in any other archived formats like .rar or .tar.gz). The name of this file must be ASSG<NUMBER>_<ROLLNO>_<FIRSTNAME>.zip. (For example: ASSG4_BxxxxxyCS_LAXMAN.zip). DO NOT add any other files (like temporary files, input files, etc.) except your source code, into the zip archive. The source codes must be named as

ASSG<NUMBER>_<ROLLNO>_<FIRSTNAME>_<PROGRAM-NUMBER>.<extension>

(For example: ASSG4_BxxxxxyCS_LAXMAN_1.c). If there are multiple parts for a particular question, then name the source files for each part separately as in

ASSG4_BxxxxxyCS_LAXMAN_1b.c.

If you do not conform to the above naming conventions, your submission might not be recognized by some automated tools, and hence will lead to a score of 0 for the submission. So, make sure that you follow the naming conventions.

Standard of Conduct

Violations of academic integrity will be severely penalized. Each student is expected to adhere to high standards of ethical conduct, especially those related to cheating and plagiarism. Any submitted work MUST BE an individual effort. Any academic dishonesty will result in zero marks in the corresponding exam or evaluation and will be reported to the department council for

record keeping and for permission to assign an F grade in the course. The department policy on academic integrity can be found at:

http://minerva.nitc.ac.in/cse/sites/default/files/attachments/news/Academic-Integrity_new.pdf .

Assignment 8 **Questions**

Question 1

Given arithmetic expressions consisting of basic arithmetic operators (+, -, *, /) and some operands in preorder and inorder format, construct a tree T with operands in leaves and operators in internal nodes. Print the postorder traversal of the tree T.

Sample Input & Output

Input: - 4 7 (Preorder Format)

4 - 7 (Inorder Format)

Output: 4 7 - (Postorder of Tree T)

Test cases

Test case 1	Test case 2
Input: + * - 5 4 100 20 5 * 4 + 100 - 20 Output: 5 4 * 100 20 - +	Input: / 6 - 14 17 6 / 14 - 17 Output: 6 14 17 - /

Question 2

Continuing the above question (i.e., now you have the tree T), Evaluate the expression represented by the expression tree T and print the output.

Input: + * - 5 4 100 20

Output: 100

Test cases

Test case 1	Test case 2
Input: / 6 - 14 17 Output: -2	Input: + *5 4 - 100 / 20 2 Output: 110