National Institute of Technology Calicut
Department of Computer Science and Engineering
Third Semester B. Tech.(CSE)
CS2092D Programming Laboratory
Assignment 7 Modification

Naming Conventions for Submission

The source codes must be named as:

ASSG7_<ROLLNO>_<FIRST-NAME>_MOD.c

(For example: $ASSG1\_BxxyyyyCS\_LAXMAN\_1.c$). If you do not conform to the above naming conventions, your submission might not be recognized by our automated tools, and hence will lead to a score of 0 marks for the submission. So, make sure that you follow the naming conventions.

Standard of Conduct

- Violation 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 F grade in the course. The department policy on academic integrity can be found at: http://cse.nitc.ac.in/sites/default/files/Academic-Integrity_new.pdf.

QUESTION

1. In a quaint little town, there was a group of puzzle enthusiasts who had stumbled upon a unique challenge. They had found a strange set of symbols written on an old parchment, which appeared to be a postfix expression. This collection of symbols held a mystery, and the townspeople couldn't quite figure out its significance. Intrigued by the enigma, the group turned to a local expert, a skilled problem solver named John. John was known for his knack for decoding complex problems. The townspeople explained their predicament, and John agreed to help them. John's mission was to take the postfix expression and transform it into something more understandable. He knew that the key to solving the puzzle lay in creating an expression tree. Once the expression tree was built, the mystery would unravel itself, revealing the hidden meaning of the postfix expression. John shared with you a method called "constructTree()" to build this expression tree. The method took a character array, representing the postfix expression, as its input. Upon completing the task, the goal was to print the newly discovered infix expression, shedding light on the secret concealed within the symbols. Can you assist John in solving this intriguing puzzle and uncovering the true meaning of the postfix expression?

   Input Format:

   - First line containing the size of the postfix expression
   - Single line containing the postfix expression (length ≤ 40) includes sequence of single characters and arithmetic operators (A-Z, +, -, *, /, %, ^)

   Output Format:

   - Single line containing the infix expression

   Sample Input:
   7
   ABC*+D/

   Sample Output:
   A+B*C/D