

CSC-477/677: Algorithm Analysis
Fall 2014
Programming Assignment #1
Due on: *October 16, 2014*

Implement a stack algorithm to translate and output an infix expression such as $-xy+x(yz+xy)$ into postfix, i.e., reverse Polish notation.

- There are no other operands than variables.
- All variables consist of a single letter (from the English alphabet).
- The only operations are addition, subtraction, negation, and multiplication.
- Multiplication has precedence over addition, and subtraction.
- Negation and subtraction are both written as "-" in infix expressions.
- Multiplication is indicated by juxtaposition in infix expressions just as in high school algebra, i.e., xy is the product of x and y .
- Negation has precedence over multiplication, addition and subtraction.
- Addition and subtraction have equal precedence.
- If operators have equal precedence, the left-first rule applies.
- In your postfix expression, use "~" to denote negation, and "*" to denote multiplication.

Implement in C++ or Java. The program needs to have, as comments your name, UNLV email address, assignment number, and a short description of what the program does (1-2 lines maximum). Please submit it to the TA, Mr. Sabbir Manandhar, manans1@unlv.nevada.edu, using regular email. If you have more than one file, please zip all the files and submit it the zip file to the TA. If your program does not compile, you get 0 points. The TA will return the graded assignment by email.