

Expression Evaluation Using Stack

Evaluate an expression represented by a String.

Expression can contain parentheses, you can assume parentheses are well-matched.

For simplicity, you can assume only binary operations allowed are +, -, *, and /.

Arithmetic Expressions can be written in one of three forms:

Infix Notation: Operators are written between the operands they operate on,

e.g. $5*(3+4) - 6$

Your program should read input strings from file.

input file format:

e.g.

$5*(3+4) - 6$

$10 - 18 / -2$

$11 / 5 * (3+3)$

$1/3 * 5$

Write all output result to file "project1_output.txt":

output file format:

e.g.

$5 * (3 + 4) - 6 = 29$

$10 - 18 / -2 = 19$

$11 / 5 * (3 + 3) = 13.2$

$1 / 3 * 5 = 1.67$

Note:

1. Your answer should round to 2 decimal places.
2. You should solve this problem using Stack.
3. Put all your java classes in 1 file:

Filename format:

Firstname_Lastname_CUNYID#_Project1.java

4. Make sure your java code can be tested using Java 8.