



KEAN

2020 Spring: CPS 2231 #2 & #9 Team Programming Project

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March 31, 2020

You must follow the UML below as the basis to create a calculator using Java OOP.

The requirement of the calculator

- Accept input from
 - Standard input (loop for waiting next input after printing the computation result)
 - Text file (file name: input.txt with multiple lines of arithmetic expression)
- The input string is an arithmetic expression including parentheses () and only has one line
 - The operator and operand may not have a space character as the separator
 - For example, (10.1+200 – 4.5x 5.5)/(2 -3 x5)
 - If the input string has syntax error, terminate the program and tell what is wrong.
- The operand can be an integer or a floating-point value and also negative number.
- The operators include +, -, x, / and ! (factorial)
- If the output is not an integer, round to 4 decimal places.
 - If using command line or Eclipse console
 - Input: (-20-10.1+200 – 4.5x 5.5)/(2 -3 x5)
 - Output: = -11.1654
 - If using a text file (input.txt) as input, you should create an output file (output.txt)
 - Input: (-20-10.1+200 – 4.5x 5.5)/(2 -3 x5)
 - In output file: Input: (-20-10.1+200 – 4.5x 5.5)/(2 -3 x5) = -11.1654
 - There are more than 1 input arithmetic expression in the file.
- Prepare a Microsoft Word document to present your programming design (with UML) and coding.

