



Postfix Calculator

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Due: Tuesday, 2/3/2009 at midnight in WebCT

Problem Specification

<Same as Project 1, however, there are additional test cases>

Note: the course coding standards have been updated to include more examples. Adherence to these will be strictly enforced.

Write a C program that accepts a postfix expression in the form of a single quoted string and prints the result of the expression to the *standard output* device. Your program must:

1. Consist of a single file: `postfixCalculator.c`
2. Consist of a single function: `int main(int argc, char *argv[])`
3. Compile on the `cs.unm.edu` Linux machines with gcc version 4.2.3 for `x86_64-linux-gnu`.
4. Display appropriate error messages when given erroneous input.
5. Adhere to the UNM CS-241 coding standards.
6. Assume a stack size no larger than 25 is needed.
7. Print the final result with `printf("%.3f\n", ...)`

Cutoff date

This project will *not be accepted after noon on Thursday, February 5 - regardless of when you registered for the class.*

Grading

Points	Input	Output
1	"0 5 -"	-5.000
1	"4 5 6 9 + + +"	24.000
1	" 1 5 / "	0.200
1	" 4412 3 12 31 + * +"	4541.000
1	"20000 3 12 31 + * / "	155.039
1	"2 0 * 5 0 + +"	5.000
1	" 2 0 * 5 0 + + "	5.000
1	" 2 7*5 2++"	21.000
1	" 2 7*52+ "	66.000
1	" 3 71 2 * 5862++ "	6007.000
1	" 003 71 / 282 * 58 62++ "	131.915
1	" 34 6 71 282 *- 58 62 - / +"	5038.000
1	"341 6322 71 282 * / 58 +- 62 - 1/ 4 +"	225.316
1	"341 63 22 71 282 * / 58 +- 62 - 1/ +"	284.001
2	"1 22 3 4 30555** 30666+++"	397349.000
2	"1 22 3 4 *30333* 30666+++ "	394685.000
2	" 5 7 3 4 *30 333* 30666++++"	40680.000
2	" 5 007 3 4 *30 333* 30666////"	26.311
2	" 1 1+1 1 1++/ "	0.667

Note: Since the extra credit for this project is essentially the same as for Project 1, no more than a total of 20 extra credit points can be earned for the two projects together. However much less than 20 points extra credit was earned the first project can be earned on this project.

Extra Credit Points	Input	Output
2	"2.0 3.0 *"	6.000
2	"2.4 3.1 +"	5.500
2	"2.125 4. *"	8.500
2	"4.5 2 * .1 /"	90.000
2	"10.2222 .1111 0.3333 8.3333 +++"	19.000
2	"2 -8 3 * -"	26.000
2	"-22 2 -3 -2 * - +"	-26.000
2	" -2.125 4. * 10.0 -3.0 -2. ++*"	-42.500
2	-.4	-0.400
2	"-.0001 3.000 4 + *"	-0.001