

Consider your code from Assignment 3-1.

**Conditional compilation:** To make this code more interesting, I want you to declare a global variable which is a file handle, and in the main() I want you to open a "log" file in the same directory as the code. Print out "correct" or "incorrect" along with the equation and calculated answer as well as the answer entered by the user in the log file. This should all be on one line, and look like the following:

Correct -  $(4 * 5 = 20)$  - Entered: 20

Incorrect -  $(3 + 4 = 7)$  - Entered: 8

Include the stats in the file and close the file when done. **All of the code associated with the log file should only be run when you compile with the -DDEBUG flag.** You should be able to compile this with "make debug" using your makefile.

I would also like you to declare four macros called ADD, SUBTRACT, MULTIPLY, and DIVIDE. They should take in two parameters and return the appropriate values. Use them as needed within your code for only Assignment 3-2 (i.e., don't use them in 3-1).

Run and test the code, creating a .log file. Make sure to "cat" the .log file to the screen when preparing your script file. Submit this as part 2. Your code still needs to do everything that it was supposed to do in part 1, as well as include the macros, log file, and conditional compilation. Make sure that you keep these two pieces of code separate. It is worthwhile when done both to look at them side-by-side to see how "readable" each piece of code is.