CSC180 – Lab 2

General Information

For this lab, you will write a simple pocket calculator program. The program will be able to display the current value on the screen of the calculator. You will store the current value of the calculator in a variable that you should declare. Initially, the current value is 0.

Do not write out the entire lab assignment and only then try to compile and debug it: this never works. If you’re new to programming, you shouldn’t, as a rule, write more than five lines of code between compilations.

As usual, you will get credit for the lab if you make reasonable progress toward completing it. Credit may be given for programs that accomplish only some of the tasks assigned. No credit will be given for programs that accomplish none of the tasks (e.g., it is unlikely that credit will be given for code that does not compile).

The TAs are here to help you. If you are stuck, ask for help!

The Tasks

1. Write a main() function which displays the following message:
   Welcome to the calculator program.
   Current value: 0
2. Write the function whose signature is
   void displayCurrentValue()
   and which displays the current value of the calculator. Test this function by calling it from main() to make sure it works. Reminder: to print int a followed by a new line, you can use printf as follows: printf("%d\n", a);
3. Write a function whose signature is
   void add(int toAdd)
   and which adds toAdd to the current value. Test the function add by calling it and displayCurrentValue from main().
4. Write a function whose signature is
   void multiply(int toMult)
   and which multiplies the current value by toMult. Test the function. Hint: Make sure that you thought about all possible values of the parameter toDiv.
5. Write a function whose signature is
   void divide(int toDiv)
   and which divides the current value by toDiv. Test the function.
6. Pocket calculators usually have a memory and a recall button. The memory button saves the current value and the recall button restores the saved value. Implement this functionality.
7. Implement a function that simulates the Undo button: the function restores the previous value that appeared on the screen before the current one.