

## Homework #1

### 5 Function Calculator

For this assignment, you are to make a program which will:

- provide a menu of functions: addition, subtraction, multiplication, division, and the binary logarithm.
- Allow the user to choose one of the functions, or quit the program.
- For each function, allow the user to enter the values for that function to compute.
- Compute each function correctly, returning the result in output.
- Return the user to the menu after every calculation.

For example, your program may present as follows:

```
terminal> mycalculator.exe
```

This program is a 5 function calculator. Please select from the following functions or Enter 0 to quit.

1. addition
2. subtraction
3. multiplication
4. division
5. binary logarithm

Your choice: 1

You have selected addition. Please enter the first number: 5

Please enter the second number: 10

5.000000 + 10.000000 = 15.000000

Menu (0 to quit):

1. addition
2. subtraction
3. multiplication
4. division
5. binary logarithm

Your choice: 5

You have selected binary logarithm: Please enter a number: 1024

$\log_2(1024.000000) = 10.000000$ .

Menu (0 to quit):

[...]

Your choice: 0

Program exiting.

```
terminal>
```

### Rubric

Program compiles correctly .....	20 pts
User can select functions from menu .....	10 pts
User can correctly input values into functions (real numbers) .....	10 pts
All functions compute correctly and output correct values .....	10 pts
User is able to perform any number of calculations .....	10 pts
User is able to quit at the beginning and after every calculation .....	10 pts
Program guards against bad input (division by zero, logarithms of negative values) .....	10 pts
Output is formatted to show the operands, the operators, and the resultant .....	10 pts
Top of source commented with group member names and what part they did .....	10 pts
Total.....	100 pts