# 2413 Assignment 1

Due Date
– End Of Lab –

January 26, 2016

Our purpose for this assignment is to get acclimated to the pattern for submitting assignments. You will have 3 hours to complete the assignment and submit it by the end of lab. Please review the assignment criteria for submission requirements.

The task this assignment is to read from standard in a sequence of commands which manipulate a stored integer. The stored integer will start out at value 0.

**list of commands**

1. clear
2. add < *integer* >
3. subtract < *integer* >
4. divide < *integer* >
5. multiply < *integer* >
6. mod < *integer* >

After processing each command, modifying the stored integer, you will print the result to standard out on its own line.

**Example Input**

```
add 20
multiply 25
divide 13
subtract 5
clear
multiply 10
add 7
mod 5
```

**Expected Output**

```
20
500
38
33
0
0
7
2
```

# 1 Organization of Files

**main.c**

1. While you can read commands using scanf
2. If "clear" call the clear function
3. Otherwise read the integer and call the appropriate function for the command.
4. continue the loop

**calc.h**

1. Contains all the function signatures for executing the commands.
2. The clear command takes no arguments and the return type is void.
3. All other commands take as input a single integer and return type is void.

**calc.c**

1. declare a local integer variable which is the integer store.
2. Initialize it to 0.
3. Implement each function to manipulate the integer according to the command.
4. After manipulating the integer, printf its value to standard out on its own line.

## 2 Compilation and Commandline Usage

### Compilation

```
dir> gcc -Wall -O3 main.c calc.c -o calc.exe
```

### Interactive Execution

```
dir> calc.exe
```

### Script Execution

```
dir> calc.exe < inputscript.txt > output.txt
dir> type/cat output.txt
```

## 3 Submission

Be sure to zip up the files in a standard archive. Name the archive after your lastname and assignment number. Test the contents of the archive one last time before submitting through blackboard.