# CS 240 - Homework 5

| Assigned: Monday, 3.27.17 | Due: Monday, 4.3.17, 4:00pm |
|---|---|

Make a subdirectory "hw5" in your cs240 folder for this assignment and copy the files from /courses/cs240/s16/jmcurran/GROUP/hw5.

## Overview

In this assignment you'll start using pointers and compose a makefile.

## Provided Files

You are given 5 files to start:

| | | |
|---|---|---|
| 1. | main.c | This is a sample driver file. It uses the functions you'll define to manipulate the values in two integer variables. |
| 2. | negate.h | Contains the function declaration for the function `negate`, which accepts a pointer to an int variable and negates it (e.g., -10 becomes 10 and vice versa). |
| 3. | swap.h | Contains the function declaration for the function `swap`, which accepts pointers to two int variables and swaps their values (you can find this in the notes). |
| 4. | swapAndDrop.h | Contains the function declaration for the function `swapAndDrop`, which accepts pointers to two int variables and an int. It swaps the values of the variables and subtracts the int from both. |
| 5. | sample.out | This file shows what your output should look like if your functions and makefile work correctly. |

## What you need to do

1. Create .c files for each header that contain the definition of the function in the header.
2. Write a makefile to build an executable called `main`.

## Deliverables

The following files should be in your hw5 folder when you are done:

| | | |
|---|---|---|
| main.c | makefile | |
| swap.h | negate.h | swapAndDrop.h |
| swap.c | negate.c | swapAndDrop.c |

## Grading

You will be graded on the following:

- Adherence to cs240 style guidelines.
- Use of pointers in function definitions.
- Functionality of your makefile (does it produce an executable? does it provide a clean command?)

I will review your source files, run make, and run the executable main.

`How to test your work:`

Navigate to your hw5 folder and do the following:

```
$ make
$ make clean
$ ./main
```

The majority of your grade will be based on whether the above series of commands produces output that matches that of `sample.out`.

## Notes

You can look at the L14 materials in the GROUP folder for an example makefile and use that as a template.

If you are confused about anything in this assignment, ask me about it.