

HW #3: C Formatted Input/Output

Due dates:

Part I: Monday Feb 1st, at the beginning of the class. Make sure to write your name and msunetid on your paper.

Part II: Sunday Jan 31st, 11:59 pm through Handin (<https://secure.cse.msu.edu/handin>)

Part I: Comprehension Questions

1. State if each of the following is a legal C identifier: (2 pts)
Main 2016Average \$alpha _username
2. What is the output of the following? If the program outputs any spaces, clarify how many. (2 pts)
a) `printf("Output is: %+5d", 35, 75);`
b) `printf("%10.4E", 12.51);`
3. Write calls to `printf` to display the float `x` in the following format: (2 pt)
a) Exponential notation, left justified, in field size of 7 with 2 digits after the decimal point
b) Decimal notation, with +/- sign always written, right justified, in field size of 10, with 3 digits after the decimal point, and 0 used for any padding necessary
4. Assume that `a` and `b` are int variables and `x` is a float variable. What is the value of each variable after the following `scanf` is called: (2 pts)
`scanf("%d%f%d", &a, &x, &b);`
if the user enters:
5.5 7 10
5. Write a statement to read the time from standard input in the form of `hh:mm:ss` and store it in three integer variables denoting the hours, minutes and seconds. (2pts)

Part II: Lab Assignment

Getting started

Change into the `cse220` directory

Create a new directory called `lab03`

Change into the new directory

Implement the program below in your `lab03` directory

Project Description

You are to write a program that converts weights from pounds to ounces and grams. Call your program `weightConversion.c`

Your program should ask the user to enter 4 weights, read the weights entered in the following format:

weight1/weight2/weight3/weight4

The program should then convert each weight from pounds to ounces and from pounds to grams and output the result as the following example:

Weight 1:	2.50 lbs =	40.00 Oz =	1133.98 g
Weight 2:	15.00 lbs =	240.00 Oz =	6803.89 g
....			

All values must be right justified, in a field of size 10, showing two digits after the decimal point. Compile your program and generate an executable file called weightConversion.

Handin

Submit through the handin system the following files: weightConversion.c and weightConversion

The “handin” system has options to allow you to review your files online and to download them. You Should always verify that you submitted the correct files and they were received by the handin system. You can submit files as many times as you like for a particular assignment. Handin will only keep the last version of each file. Remember to submit your files prior to the deadline as you won’t be able to use handin if the deadline has passed.