A290/A590
Tools for Computing
System Programming with C and Unix.

Program 1

DUE Saturday, September 3, 2016 by 11:59.59.99pm (before Midnight)
Submit your `buffet.c` file to your Canvas "Homework PROGRAM 1" Assignment

Preliminary Information:

Your goal is to show you can successfully submit a *.c file from your Silo account to your Oncourse Dropbox "Programs" folder. That file will be your version of `buffet.c` as presented in our first 3 meetings. If you have been keeping up, you may merely need to hand it in, with **almost no** modifications over what we did in class ending on 8/29/2016.

Program 1 Requirements:

Create your version of `buffet.c` file and its contents demonstrated in class. Your version merely means you created it on your own Your `buffet.c` **must** include the following features:

1. Proper Comment Block at the head of the file as shown in the Meeting 2 guide.
2. Proper and appropriate "in-line" or "in the code" comments similar to examples shown in class examples.
3. The full set of "printf" statements using the "sizeof" command as shown in Meeting Guide 2.
4. The set of 6 variables of the proper data types and their assigned initial values as shown in Meeting Guide 2.
5. The two "printf" statements associated with the variables in #4, displaying those values as demonstrated.
6. The 5 variables added later in Meeting Guide 2 and discussed in Meeting 3 in support of some simple math work.
7. The 4 basic arithmetic operators used on the two **int** variables and the "printf" statement as shown in Meeting Guide 2 and 3.
8. The 3 additional arithmetic operations performed on some of the output from #7 and the "printf" statement to show the results.
9. The full "program" adopted from Hoover that was discussed and demonstrated in class using Meeting Guide 3. Your version should result in the same output as shown in class **after modifying Hoover's code.** In other words, your **final and only** version should include the 3 variables used and the "printf" statement used and apply the two "while" loops using "i" and "j" so that **all** possible results (sums of squares) are properly displayed. [This means you **DO NOT** need to include any of the preliminary versions including those we called **squares1.c** and **squares2.c**.]

Again, BE SURE you thoroughly comment your actual code and include the expected Heading Comment Block show in Meeting Guide 2 and in class examples. BE SURE to consult the "Commenting Guidelines" document linked to in the "Programs" section of the Homework Page. These comments and comment block will represent 20 of your 100 points.

Scoring:

File successfully submitted to correct OnCourse Dropbox Folder: 20
Proper Comments and Heading Comment Block: 20 points
File compiles and runs: 20 points
"sizeof" statements display correctly: 10
All 7 arithmetic operations succeed and display proper output: 10

"Sum of Squares" function works as per Hoover (ONLY displays solutions that are unique combinations of squares): 10 [Maximum Total Score: 90] **OR**

"Sum of Squares" function works, recognizing/displaying **all** possible solutions: 20 [Maximum Total Score: 100]

[continued]

Handing in your Assignment

While you earn 20 points for submitting this Program to Canvas, it should be clear if you do not, you will not actually be able to earn any points, as we cannot grade what is not there. You will have to use some form of “Secure FTP” program. This could be the one that comes with puTTY, or it could be WinSCP, or it could be some other tool you are already familiar with. Just be sure you understand you cannot simply “drag-and-drop” a file from Silo to Canvas. It will usually take two steps: 1: Move the file from Silo to the computer you are using, 2. Upload the file from the computer you are using to Canvas with the usual method. If you have questions about this, ask them ASAP. We will review this process together in Meeting 4.