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

Program 3

DUE Saturday, October 1, 2016 by 11:59.59.99pm (before Midnight)
Submit your `P3.c` file to your Canvas "Homework PROGRAM 3" assignment in the Homework PROGRAMS group.

Preliminary Information:

Your goal is to submit a single file with your versions of the bit operations discussed and presented in Meeting 9, and the pointer examples presented in Meetings 9 and 10. If you have been keeping up, you may merely need to hand it in, with little or no modifications over what we did in class on 9/26/16 and 9/28/2016.

Program 3 Requirements:

Create your version of `P3.c` file and include all the contents demonstrated in class. Your version merely means you created it on your own Your `P3.c` **must** include the following features:

1. Proper Comment Block at the head of the file.
2. Proper and appropriate "in-line" or "in the code" comments.
3. A `main()` that calls all the following as functions **and** uses function prototypes.
4. **Function** that mimics/produces the results seen in `bitmodels.c` from Meeting 9 Guide: Output showing the results of NOT, AND, OR and 3 different bitmask operations: set, clear, and check/display each bit value.
5. **Function** that mimics/produces the results seen in the `pointers.c` example in Meeting 9.
6. **Function** that mimics/produces the results seen in the `morepointers.c` example in Meeting 9.
7. **Function** that mimics/produces the results seen in the `pointerfunction.c` example in Meeting 10.
8. **Function** that mimics/produces the results seen in the `pointerarithmetic.c` example in Meeting 10.
9. **Function** that mimics/produces the results seen in the `pointerarray.c` example in Meeting 10.

Remember, BE SURE you thoroughly comment your actual code and include the expected Heading Comment Block. These comments and comment block will represent 20 of your 100 points.

Scoring:

Proper and adequate "in-code" Comments and proper Heading Comment Block: 20 points
File compiles and runs: 10 points
A `main()` that calls all 6 functions and uses function prototypes: 10 points
All bit operations similar to `bitmodels.c` work correctly: 10 points
All components similar to `pointers.c` work correctly: 10 points
All components similar to `morepointers.c` work correctly: 10 points
All components similar to `pointerfunction.c` work correctly: 10 points
All components similar to `pointerarithmetic.c` work correctly: 10 points
All components similar to `pointerarray.c` work correctly: 10 points

Handing in your Assignment

As with all previous Programs and Assignments, you will have to use some form of "Secure FTP" program to submit your file to your Canvas "Homework PROGRAM 3" assignment in the Homework PROGRAMS group. It will usually take two steps: 1: Move the file from the 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.