CIS 330: Project #2B
Assigned: April 16th, 2016
Due April 22nd, 2016
(which means submitted by 6am on April 23rd, 2016)
Worth 4% of your grade

Assignment: Write a program that reads the file "2B_binary_file". This file contains a two-dimensional array of integers, that is 10x10. You are to read in the 5x5 bottom left corner of the array. That is, the values 0-4, 10-14, 20-24, 30-34, and 40-44. (Note: I conceptualize the bottom left corner as the start of the image … others may conceptualize it as the top left corner … the point is you want to read 0-4, 10-14, etc.) You may only read 25 integers total. Do not read all 100 and throw some out. You will then write out the new 5x5 array. Please write this as strings, one integer per line (25 lines total). You should be able to "cat" the file afterwards and see the values.

Use Unix file streams for this project (i.e., fopen, fread, fseek, fprintf). Your program will be checked for good programming practices. (Close your file streams, use memory correctly, variable initialization, etc.)

Also, add support for command line arguments (argc and argv).

Your program should run as:
./<prog_name> <input_name> <output_name>

(The input_name will be 2B_binary_file, unless you change it.)

Finally, note that I am handing you a binary file. I think we are all little endian, and so it will be fine. (It was last year) But, if it is big endian, then we will have a problem. You can check if it is little endian by printing the first two values of the file. They should be "0" and "1".

Please submit a tarball with (1) a Makefile (should be simple), (2) your source code, and (3) the output ASCII file from running your program, with the name "ASCII_output".