CIS 330: Project #2B
Assigned: April 17th, 2017
Due April 22nd, 2017
(which means submitted by 6am on April 23rd, 2017)
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:
./proj2B <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 has been the last three years.) 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 named proj2B.tar 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”. All of these contents should be in a sub-directory called
proj2B. You should also remove any .o files and the “proj2B” binary.

The grader will be testing your code on ix and use the following steps:
tar xvf proj2B.tar
cd proj2B
make
./proj2B /path/to/2B_binary_file /path/to/output