CS 288 2018S Section 006
Homework 08

Due: At 11:45pm on Friday May 4th, 2018.

Starting with a C program that initializes an *N* by *N* matrix to random integers between 1 and 10 inclusive, calculate the distribution of values by dividing the work up among *W* threads. The matrix should be defined as a shared variable.

Assuming that *N* is a multiple of *W*, divide the matrix into *W* equal-size strips of (*N* / *W*) rows. Each thread should calculate the distribution of the values 1 through 10 for its strip. When all threads have completed their tasks, one of the threads should calculate the aggregated answer and writes the results to standard output. The value *N* should be read as command-line argument.

Run experiments for *N* equals 64, 128, and 256 and *W* equals 1, 2, and 4 for a total of nine test runs.

Your deliverables are the C program, and a brief description of the results. Before submitting your solutions via Moodle, zip the C program along with the text document and name the archive, if your name is Harry Houdini, for example, *`HW8_HarryHoudini.zip`*. You may use gzip if that's more convenient.