Homework3

In this programming homework, you are asked to write a matrix multiplication in CUDA. Do not use any optimization such as shared memory but simply port serial matrix multiplication to CUDA. Test input matrix sizes from 512\*512 to 4096\*4096 with an interval of 512, and compare its performance with CPU counterpart. Draw a performance graph where x-axis is input size and y-axis is execution time (either milliseconds or seconds).

Homework4

In this programming homework, you are asked to modify the shared memory version of â€œmatrix multiplicationâ€ CUDA SDK example (https://github.com/NVIDIA/cuda-samples/tree/master/Samples/0\_Introduction/matrixMul) to work for non-square thread configuration such as 16\*32 or 32\*16. Make sure to include code to check the correctness by comparing results with CPU results.