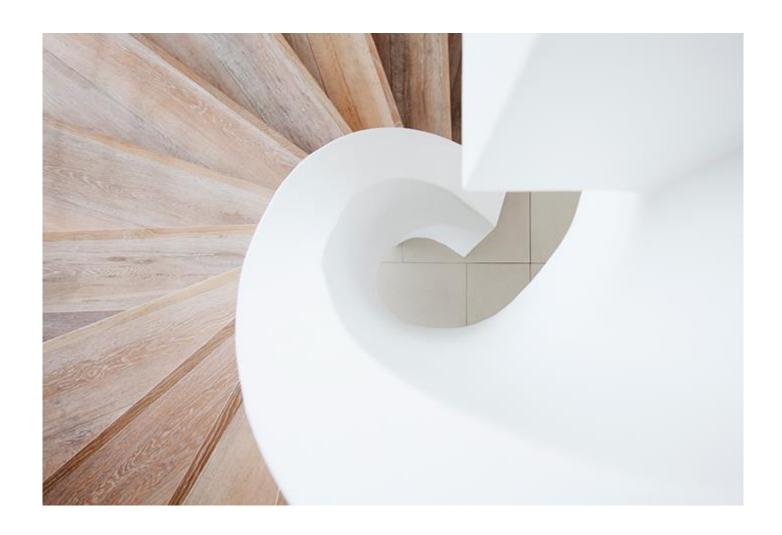# EE 451 Programming HW #6

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Prob 2:

Approach 1:

Execution time of Kernel: 7171858.000000 ns

Value of C[451][451] = 2048

Approach 2:

Execution time of Kernel: 2530593.000000 ns

Value of C[451][451] = 2048

Observation:

As we can see from the execution times, the time of approach 2 is one-third that of Approach 1. This is because approach 2 loads block of 32x32 matrices (both A and B) into the shared memory. This helps in reducing the memory access time for each thread while performing operations. Instead of fetching elements from global memory everytime, it instead now fetches from shared memory which has less access time. Thus approach 2 is faster.