Homework 1: report

**Question (1):**

No. of blocks=ceil(4000/512)=8 blocks

Threads= 8\*512 = 4096 threads

**Task (1):**

*GPU used: GTX 1060 Max-Q, CUDA compute capability: 6.1 Pascal*

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If single block is used, maximum threads/block (for my GPU) = 1024. Each thread in the program written in task one is responsible for 4 elements, so maximum vector size = 4x1024=4096

**Task (2):**

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\*\*Screenshot taken for 10x8 image for illustration. Code includes 1000x800 image as specified.

We will have ceil(800/16) blocks in width (50 blocks) and ceil (1000/16) blocks in the height (63 blocks). So we will have 63x50 = 3,150 blocks in total. Total number of threads=3150x16x16=806,400 threads.

**Task (3):**

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