## Report Labwork 4

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## Threads

- Firstly, I calculate the size of pixels.
- Secondly, I allocate the input memory and the ouput memory of CUDA with cudaMalloc() function.
- Thirdly, I copy CUDA Memory from CPU to GPU with cudaMemcpy() function in cudaMemcpyHostToDevice mode.
- $\bullet\,$  Fourthly, I set the block size blockSize to 64 and calculate number of block equal to

blockSize = pixelCount/(blockSize \* 3)

.

- Fifthly, I init the  $rgb2grayCUDA_{ijj}numBlock,\ blockSize_{\dot{c}\dot{c}\dot{c}\dot{c}}()$  with the input memory and the output memory.
- Sixthly, I copy the ouput image with cudaMemcpy() function in cudaMem-cpyDeviceToHost mode.
- Finally, I clear the memory with cudaFree() function.
- The result:

USTH ICT Master 2018, Advanced Programming for HPC. Warming up... Starting labwork 3 labwork 3 ellapsed 10.7ms

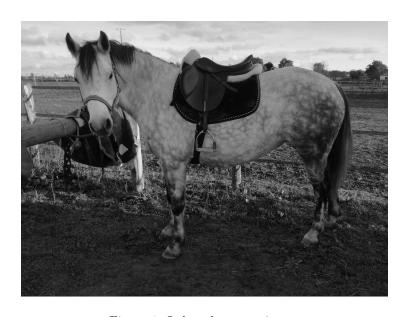


Figure 1: Labwork output image