OpenCL lab 01

1 Task 1

Copy openCL_lab01.tar.gz into a directory of your choice within your account, unpack it using gunzip openCL_lab01.tar.gz and tar xvf openCL_lab01.tar.

2 Task 2

Compile simple.c and square.c by typing make square. Run square, find out what happens if you provide suitable parameters to square. (You have to look into the source code in square.c to figure out how the parameters are being used.)

3 Task 3

Modify square.c so that each thread computes more than one element of the result in the way suggested in the lecture. What is the impact on the runtime?

4 Task 4

Modify square.c so that each thread computes each n-th element rather than n adjacent elements. Make n a parameter of the program. What is the impact on the runtime?

5 Task 5

Implement matrix multiply using openCL. You may use matmul.c as a starting point. Play with the parameters of matmul and observe their effect on the runtime.

6 Task 6

Try to find ways to improve the runtime performance of your matmul implementation.

Hand-out: 4/02/2015