

CUDA Memory Assignment

605.617 Introduction to GPU Programming

Create a program that utilizes all forms of CUDA memory. Your program should utilize host and global memory (arrays), register variables, constants, and shared memory. You can do one of two things perform similar operations with the various types of CUDA device memory or use all of the memory types in a single more complex kernel. Any comparison of timing, if the kernel code is the same, will earn extra points.

There is one opportunity for a one-time bonus (for this and any future assessments) if the code is part of your final project. You will need to screen capture output (command line) of your code executing with different numbers of threads and block sizes.

For your assignment submission, you will need to include either a link to the commit/branch for your assignment submission (preferred method) , including all code and artifacts, or the zipped up code for the assignment and images/video/links that show your code completing all of the parts of the rubric that it is designed to complete in what is submitted for this assignment.

Percentage of Total	Criteria
15%	Host Memory Usage
15%	Global Memory Usage
15%	Shared Memory Usage
15%	Constant Memory Usage
15%	Register Memory Usage
5%	Variable number of threads
5%	Variable number of Blocks
5%	Command Line Argument Usage
5%	Use of run script and/or makefile
5%	Quality of Code