

Module 06 Assignment

605.417 Introduction to GPU Programming

CUDA Register Assignment

Create a program that utilizes register memory. Your program should utilize register variables, preferably executing 4 simple math operations with shared or other types of memory. 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.

Rubric:

Task	% of total
Create program that executes kernel performing 4 simple math operations, that copies data from global to/from registers.	35%
Create program that executes kernel performing 4 simple math operations that utilizes registers.	35%
Test harness executes two separate runs of each kernel with different input data sizes, using register memory	5%
Output timing or other metrics allowing comparison of different types of device memory	5%
Quality of your code, measured by use of constants, well-named variables and functions, and useful comments in code – along with concise and modular logic	10%
Stretch Problem	10%
One-time bonus: Your submission will be part of your final project	5%

