Module 08: CUDA Advanced Libraries Assignment

605.417 Introduction to GPA Programming

Create a program that utilizes two libraries from all of the libraries discussed in this module. 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:

Criteria of Evaluation	Percent of the Total Score
Create program that executes kernel using an NVIDIA CUDA Toolkit library to execute a simple operation, e.g. perform a matrix multiplication and output results.	30%
Create program that executes kernel using a second NVIDIA CUDA Toolkit library to execute a simple operation, e.g. solve a simple mathematic equation.	30%
Test harness executes two separate runs of each kernel.	10%
Output timing or other metrics for comparison of different data sets, by size or other properties	10%
Quality of your code, measured by use of constants, well-named variables and functions, and useful comments in code	20%
One-time bonus: Your submission will be part of your final project	5%