



**Programming Assignment 4
Vector Reduce – Round 2**

Assigned Date

2/12/2015

Due Date

2/19/2015

Overview

- For this assignment, you will start with PA2, fix some issues and add enhancements.
- Fixes:
 - You should be able to reduce vectors of any size. With Threads and Blocks of any size.
- Enhancements:
 - After you do the warp reduction and block reduction you have several options/versions of the CUDA code (this could be selected by a command-line parameter or a compile time define)
 - a) Have the kernel end and go back to the CPU which then calls the same kernel with different parameters.
 - b) Have the kernel call the same kernel with different parameters.
 - c) Have the Block sums passed back to the CPU and then summed there.

Project Requirements

- 2 versions of the code:
 - A compiled and running sequential C program
 - A compiled and running CUDA program
- Multiple timings of runs of various sizes.
- Appropriate graphs for each version/option
- A comparison among versions/options

Deliverables

- Bring output to class for discussion on the day the project is due.
- Have a pdf of your writeup and a zip of your source code emailed to Fred Harris and Lee Barford (DO NOT send binaries). [DO NOT ZIP the PDF]
 - Firstname dot Lastname at ... (Fred is cse, Lee is gmail)
 - Subject: CS791v-PA4
 - 1 message – 2 attachments (pdf and zip)