



CS-4515, Computer Architecture,  
D-term 2019

Homework 5 (20 points)  
Assigned: Thursday, April 11, 2019  
Due: Sunday, April 21, 2019, at 6:00 PM

## Homework Assignment #5 — Data-level Parallelism

### Assignment

Read Chapter 4 of Hennessy & Patterson, 6<sup>th</sup> edition, in its entirety.

Do all questions under one bullet, but do not do more than one bullet.

- Answer questions 4.9a, 4.9b, and 4.9c of Hennessy & Patterson, 6<sup>th</sup> edition.
- Answer all parts of question 4.14 of Chapter 4 of Hennessy & Patterson, 6<sup>th</sup> edition.
- Answer all parts of question 4.13 plus 4.15 and 4.16 regarding GPU architectures.

### Individual or team project

You may work on this assignment as individuals or in two person teams. See below for team information.

You may consult with your classmates or others on the general nature of the assignment, but you must prepare and write your solution yourself, in your own words.

If you do not have time to finish this assignment please turn in what you have completed, along with a statement of how much time you spent on the assignment and an explanation of where you had difficulty.

This assignment is due on Sunday, April 21, 2019, at 6:00 PM.

### Deliverables

Submit your written answers to one of the Exercises to *Canvas*.

This assignment is named *Homework #4*.

The overall value of this assignment is 20 points.

### Homework Teams

If you wish to work as a two-person team on the homework, *you must register your team* by sending e-mail to [cs4515-staff@cs.wpi.edu](mailto:cs4515-staff@cs.wpi.edu) at least one day in advance. Submit only one copy of the assignment. Submit it to *Canvas* under your Team's name; *be sure that both team members' names are on all files*.

Note that this assignment is due on **Sunday** *after* Project Presentation Day.