CS-4515, Computer Architecture,
D-term 2019

Homework #4 (20 points)
Assigned: Friday, April 5, 2019
Due: Thursday, April 11, 2019, at 6:00 PM

Homework Assignment #4— Thread-level Parallelism

Assignment

For this chapter, do one of the following. Do all questions under one bullet, but do not do more than one bullet.

- Answer all parts of question 5.6 of Chapter 5 of Hennessy & Patterson, 6th edition.
- Answer all parts of question 5.10.
- Devise *wait-free* implementations to add an item to the *tail* of a linked list using *LL* + *SC* and to remove an item from the *tail* of a linked list. Ideally, this should be consistent with the implementations of adding to and removing from the *head* of the same list, as shown in class and in the lecture notes. *Note: this is particularly challenging!*

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 Thursday, April 11, 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 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.*

Previous teams will continue thru this assignment until we are notified otherwise. If you wish to break up a previous team, please send e-mail to the same address.