CS-4515, Computer Architecture,
D-term 2019

Homework #1 (20 points)
Assigned: Tuesday, March 12, 2019
Due: Thursday, March 21, 2019 at 6:00 PM

Homework Assignment #1 — Fundamentals of Quantitative Design and Analysis

Assignment

For this chapter, do ONE of the following exercises in Chapter 1 of Hennessy and Patterson, *Computer Architecture: A Quantitative Approach*, 6th edition, pages 62 – 68.

- Exercise 1.2: Chip costs and fabrication
- Exercise 1.5: Cell phone performance and battery life
- Exercise 1.12: Quad-core with encryption
- Exercise 1.15: Amdahl's Law

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*. Your explanation of your answer is at least as important as the quantitative result.

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, March 21, 2019, at 6:00 PM.

Deliverables

Submit your written solution to *Canvas*. This assignment is named *Homework #1*.

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 gr-cs4515-staff@wpi.edu at least one day in advance. Either team member may submit an assignment to *Canvas* on behalf of the team. Submit *only one copy* of the assignment. *Be sure that both team members' names are on all files.*

(If for some assignment, team members do not work together, please send e-mail to gr-cs4515-staff@wpi.edu to have your team dissolved for that assignment. Then each member must submit an independent assignment with only his or her name on the assignment.)