Homework 5 - 7

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due: 6 December 2019

This fifth homework assignment is due on 6 December 2019, and should be submitted to BOTH Gradescope and D2L.

In this homework, you must investigate the question: *how does the optimal number of threads to use compare across two different programming languages?* You should pick a algorithm that uses threads on multiple cores/processors, and either implement it or find implementations in two different languages. You should design how to compare the "optimal" number of threads (do you fix your input size n? if so, at what value and why? what computer do you run it on?) The deliverable is a polished write-up summarizing your findings. It should probably have the following components:

- Description of the problem the algorithm defines.
- Description of the algorithm, most likely using pseudocode.
- Any references used! Links to git repos, for example. Give credit where credit is due!
- Description of your experimental set-up (what computer? how many cores?)
- Description of methods for comparison.
- Most likely a table or graph to demonstrate your findings.

Note: Since two of the first $n = 5$ homeworks are dropped, some individuals might not submit this homework. As such, you are welcome to combine / change groups for this last assignment, if needed.