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2/4/22
COMP 322

Homework 1 Report

Part A: Description

MacBook Pro (13-inch, 2018, Four Thunderbolt 3 Ports), 2.3 GHz Quad-Core Intel Core i5 Processor, 16 GB 2133 MHz LPDDR3 Memory, Intel Iris Plus Graphics 655 1536 MB Graphics.

Part B: Execution Time Comparison

Problem	Execution Time	
	Sequential	Parallel
1	23 ms	7 ms
2	13 ms	6 ms
3	15 ms	6 ms
4	41 ms	7 ms
5	50 ms	7 ms
6	6 ms	5 ms
7	25 ms	7 ms
8	37 ms	5 ms

Part C: Discussion

Yes, the results are as I expected, meaning that the parallel execution time was consistently quicker than the sequential. Given the nature of the implementations and its nested streams, the parallelism allowed for faster execution as it split the work amongst the processor cores and executed in parallel. You will notice that the problems that did not involve nested streams (2, 3, & 6) have a smaller difference in sequential and parallel execution time.