Assignment 2

Sunday, February 9, 2020 6:23 AM

Assignment 1 Part 2 Report

During the implementation process of the parallel algorithm the main problem that was encountered was deciding what needed to be forked and joined. Trial and error lead me to a temporary solution. The algorithm is not consistent and sometimes the matrix will have various random elements that were not calculated correctly. From figuring out what needed to be parallelized to testing, the second part of the assignment took approximately 1 day to complete. The majority of the time was spent debugging and testing the program.

Testing:

Number of threads	Avg. Time (seconds)	Size
1	72.5153	300
2	36.2932	300
4	18.7211	300
8	19.819	300

It appears that once you reach 8 threads the algorithm no longer cuts the time in half. It might be possible that too many threads may not always be the best solution if the algorithm is not forked and joined in an efficient way.

An interesting observation during this assignment was how depending on where you implemented the parallel command the program would either print blocks of the correctly processed information or it will be spread across the matrix. Another interesting point was when using less number of threads the inconsistency happened very rarely, while using greater number of threads the inconsistency appeared more often.

Model name: Intel(R) Core™ i7-8550U CPU @ 1.80GHz

4	36	216