

Write up

Project 0 we needed to find the run times when using 1 thread and 4 threads to do this I modified the skeleton code to run a one core run and then a 4 core run afterwards. The times came back pretty close to the initial guess that I had of being almost 4 times faster.

One core:

Peak: 202.36 Megmults per second

Average: 195.46 MegaMults per second

Four core:

Peak: 772.25 MegaMults per second

Average: 771.75 MegaMults per second

I ran this on flip 3 when the cpu usage was less than 3% so well within the acceptable range. Seeing the results be almost 4 times the speed for 4 times as many threads shows that the multithreading does actually decrease run time and allow for fast processing. It is this way because there are 4 times as many threads working on a problem so while one waits for something the others are still going. Constantly processing more information that if one thread had to do everything in order on its own.