|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | P = 1 | P =2 | P = 4 | P = 8 | P = 16 |
| N = 100 | 2454 ms | 1298 ms | 1678 ms | 4536 ms | 3769 ms |
| N = 10000 | 232009 ms | 11893 ms | 11998 ms | 103487 ms | 1070003 ms |
| N = 1e4 | 245132 ms | 119342 ms | 80132 ms | 76043 ms | 80165 ms |

Anisha Aggarwal

Lab assignment 3

\*Malony gave me an extension to turn this project in by today (Friday).

Run commands:

make clean

make all

make run

(\*Note: make run will run the program with 1, 2, 4,8, 16 threads)

Since my computer has 4 cores, we would expect to see these results for my program. The most efficient run time being when there are 4 threads. When the thread count was over 4, we started seeing it run longer because there are only 4 threads it can run at one time. We can also see that below 4 threads, the run time is long because the CPU is sitting idle since not all the cores are being used, making it inefficient.

To change the number of iterations, in the file parallel.C, change NINTERS. To change the input size, change the variable N in the file parallel.C. The defaut is currently to run 10000 iterations with 100x100 input size.