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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)

	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

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.