SCS4210/IS4110/CS4110
Parallel Computing
Results of Running a matrix multiplication on Sequence, Pthread and OpenMP

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2018/IS/064

I have a linux machine with 8 CPUs

```
cocogardenhh@ubuntupc:~$ lscpu
Architecture:                   x86_64
CPU op-mode(s):                 32-bit, 64-bit
Byte Order:                     Little Endian
Address sizes:                  46 bits physical, 48 bits virtual
CPU(s):                         8
On-line CPU(s) list:            0-7
```

I have implemented a code for multiplying a **2000 X 2000** matrix.

Sequential

```
Sequential method Matrix multiplication of 2000 X 2000 matrix
Time taken = 5.736064 seconds.
```

Pthread
Ran several times and get the minimum time taken
No. of Threads - 8

```
cocogardenhh@ubuntupc:~$ cc -O3 pthread.c -o pthread -lpthread && ./pthread
Pthread method Matrix multiplication of 2000 X 2000 matrix using 8 threads.
Time Taken = 0.748052 seconds.
```

OpenMP
Ran several times and get the minimum time taken
No. of Threads - 8

```
ncocogardenhh@ubuntupc:~$ cc -O3omp.c -o omp -fopenmp && ./ompd
OpenMp method Matrix multiplication of 2000 X 2000 matrix using 8 threads.
Time taken = 0.698111 seconds.
```

Summary

Method	Sequential	Pthread	OpenMP
Time Taken (s)	5.736064	0.748052	0.698111