# CS4532 Concurrent Programming

# Take Home Lab 3 and 4

1.

2. openMP

3.

4.

**Sequential multiplication**

Time taken to execute in n-200 : 0.0137264

Time taken to execute in n-400 : 0.0846004

Time taken to execute in n-600 : 0.364601

Time taken to execute in n-800 : 1.72761

Time taken to execute in n-1000 : 4.18141

Time taken to execute in n-1200 : 14.987

Time taken to execute in n-1400 : 24.5662

Time taken to execute in n-1600 : 38.2599

Time taken to execute in n-1800 : 58.3122

Time taken to execute in n-2000 : 82.5089

**Parallel multiplication using openMP**

Time taken to execute in n-200 : 0.00864494

Time taken to execute in n-400 : 0.0483061

Time taken to execute in n-600 : 0.28274

Time taken to execute in n-800 : 2.03893

Time taken to execute in n-1000 : 4.59359

Time taken to execute in n-1200 : 8.6835

Time taken to execute in n-1400 : 14.5553

Time taken to execute in n-1600 : 23.0712

Time taken to execute in n-1800 : 36.0491

Time taken to execute in n-2000 : 51.9351

5.

Architecture: x86\_64

CPU(s): 4

Thread(s) per core: 2

Core(s) per socket: 2

Socket(s): 1

Model name: Intel(R) Core(TM) i7-4510U CPU @ 2.00GHz

CPU MHz: 1975.546

L1d cache: 32K

L1i cache: 32K

L2 cache: 256K

L3 cache: 4096K