

Name: Shreya Palit

Email: palits@oregonstate.edu

Project Name: Simple OpenMP Experiment

CS 575 - Project #0

1. Tell what machine you ran this on

I ran this on the OSU flip server.

2. What performance results did you get?

I chose the size of the array to be 16800.

```
[flip2 ~ 987$ bash script.bash
NUMT = 1
OpenMP version 201107 is supported here
For 1 threads, Peak Performance = 168.97 MegaMults/Sec
NUMT = 4
OpenMP version 201107 is supported here
For 4 threads, Peak Performance = 618.65 MegaMults/Sec
```

For 1 thread, peak performance is 168.97 MegaMults/Sec

For 4 threads, peak performance is 618.65 MegaMults/Sec

3. What was your 1-thread-to-4-thread speedup?

Speedup = Performance for 4 threads/ Performance for 1 thread = 3.66

4. Your 1-thread-to-4-thread speedup should be less than 4.0. Why do you think it is this way?

The performance of a parallelized computation may be limited for several factors such as a slow I/O operation, memory access latency, or other system-level limitations. Even if multiple threads are used such as 4 in this case, the overall speedup may be constrained by overheads, resulting in a speedup that is less than 4.

5. What was your Parallel Fraction, F_p ? (Hint: it should be less than 1.0, but not much less.)

$F_p = (4./3.)*(1. - (1./3.66)) = 0.97$