CSE 179
Short Report

Lab Session 2

OpenMp

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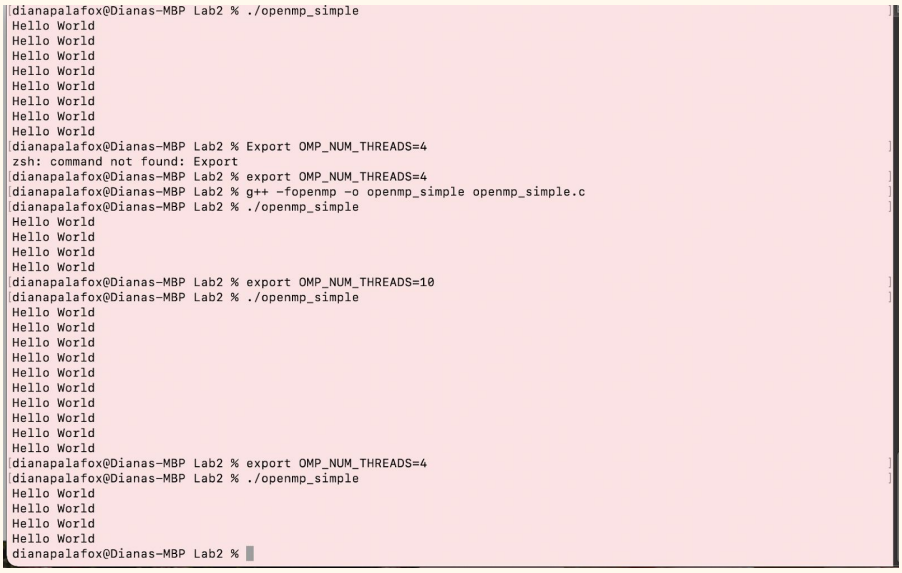

INTRODUCTION

For this lab we had to run OpenMp API.

1. OpenMP hello world

We can see with export OMP_NUM_THREADS=4 we can change the number of threads we have hence printed out.

2. Hello world Extension

Here we print out the threads using the APIS omp_get_num_threads() and omp_get_thread_num();

```
[dianapalafox@Dianas-MBP Lab2 % vim openmp_simple.c                                    ]
[dianapalafox@Dianas-MBP Lab2 % g++ -fopenmp -o openmp_simple openmp_simple.c          ]
[dianapalafox@Dianas-MBP Lab2 % ./openmp_simple                                        ]
thread_id is:thread_id is:thread_id is:3hello world
thread_id is:0hello world
total number of threads is4thread!:
2hello world
1hello world
[dianapalafox@Dianas-MBP Lab2 % vim openmp_simple.c                                    ]
```

3. Parallelization of matrix vector multiplication

Here we use different APIs to create the vector multiplication. Following we use is #pragma omp parallel for 3.1 and 3.2 #pragma omp parallel for schedule(static) num_threads(threads) and #pragma omp parallel for schedule(dynamic) num_threads(threads)