COSC1112/1114: Operating Systems Principles

Lab 4 (week 5)

1. #pragma omp parallel is an OpenMP compiler directive which indicates the system to create as many threads as the number of cores available. Run the following code to see how many cores you can use (Note gcc –fopenmp –o xxx xxx.c).

```c
#include <omp.h>
#include <stdio.h>

int main(int argc, char *argv[])
{
        /* sequential code */
        #pragma omp parallel
        {
                printf("I am a parallel region.\n");
        }
        /* sequential code */
        return 0;
}
```

2. Run the following code to see the difference between using OpenMP and not using OpenMP

```c
#include <omp.h>
#include <stdio.h>

int main(int argc, char *argv[])
{
        int   i = 0;
        #pragma omp parallel for

        for(i = 0; i < 10; i++)
        {
                printf("I am a parallel region.\n");
                sleep(1);
        }

        return 0;
}
```