

CS3013 Project4 Report
Yuan Wang
ywang19@wpi.edu

Host Machine MacBook Pro 13
The file path name is /etc/
32-bit Ubuntu 16 virtual machine

Command getting result from file path /etc/:

```
yuan@yuan-VirtualBox:/media/sf_VMshared/proj4$ ls -ld /etc/* | ./proj4
```

The result:

```
Bad Files: 0
Directories: 132
Regular Files: 103
Special Files: 0
Regular File Bytes: 368988
Text Files: 87
Text File Bytes: 208383
the amount of CPU times user used: 88.000000 ms
the amount of CPU times system used: 616.000000 ms
the elapsed wall-clock time for the command to execute: 2.00
the number of times the process gave up the CPN voluntarily: 10
the number of major page faults (hardwarer): 0
the number of minor page faults (software): 102
```

Command getting result from file path /etc/: with thread mode (thread 4)

```
yuan@yuan-VirtualBox:/media/sf_VMshared/proj4$ ls -ld /etc/* | ./proj4 thread 4
```

The result:

```
Bad Files: 0
Directories: 132
Regular Files: 103
Special Files: 0
Regular File Bytes: 368988
Text Files: 103
Text File Bytes: 368988
the amount of CPU times user used: 92.000000 ms
the amount of CPU times system used: 652.000000 ms
the elapsed wall-clock time for the command to execute: 2.00
the number of times the process gave up the CPN voluntarily: 190
the number of major page faults (hardwarer): 0
the number of minor page faults (software): 125
```

Performance Table:

The wall clock time are almost the same during the test.

The more threads, the program always spends more on **USER TIME less than SYSTEM TIME.**

With the thread number increases, the inconsistent of performance statics grow wider.

NUM OF THREADS	USER CPU TIME	SYSTEM CPU TIME	WALL CLOCK TIME
1	32	640	3
2	96	640	2
3	96	636	2
4	96	632	2
5	64	652	2
6	64	664	2
7	116	612	2
8	88	648	2
9	112	616	2
10	96	632	3
11	108	612	2
12	84	744	2
13	104	620	3
14	88	632	2
15	120	600	2