Homework 01: Report

Machine used: oxford

File Used: linesNumbers4m.txt

NOTES: Used the Horato partitioning scheme for quicksort. Multiprocessing/threading is implemented for both the sort and merge. Only times that come out weird are sortProcess for 16 processes, as those times exceed the 8 processes times. However, I think that's due to the overhead involved with process creation. Also, compiling sort threads gives warnings, but that's just void pointer stuff. The program definitely works.

All times are in seconds, average is bolded

sortSeq.c

9.038031	9.200980	9.218053	**9.152355**

sortThread.c

1 Thread:

9.430065	9.440508	9.503213	**9.457929**

2 Threads:

5.054045	5.020392	5.204058	**5.092832**

4 Threads:

3.354952	3.324011	3.348229	**3.342397**

8 Threads:

2.638520	2.752565	2.573124	**2.654736**

16 Threads:

2.581959	2.636731	2.505687	**2.574792**

sortProcess.c

1 Process:

10.633108	10.635079	10.550766	**10.606318**

2 Processes:

6.731522	6.448063	6.482507	**6.554031**

4 Processes:

5.100297	5.518454	5.019322	**5.212691**

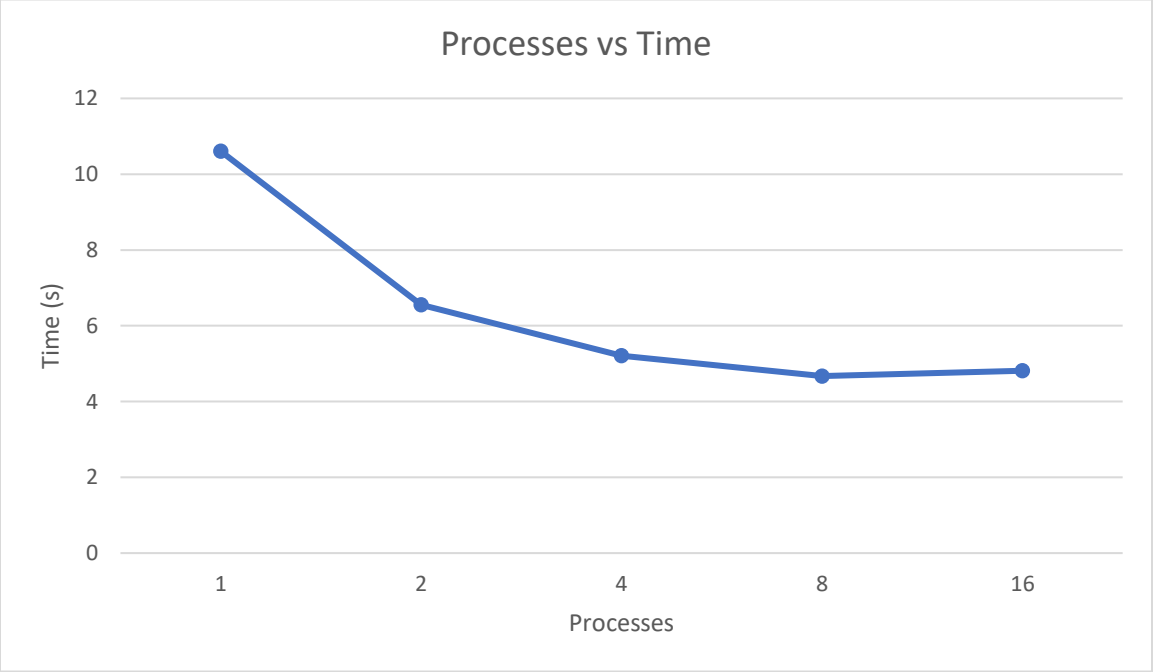
8 Processes:

4.709922	4.616303	4.690045	**4.672091**

16 Processes:

4.828058	4.819935	4.788792	**4.812262**

Processes vs. Threads:



Time vs Threads: