

Is the comparison between run times a fair one? Why or why not?

- The comparison was not a fair one as it is more favourable towards multiple processes. It is such because multiple processes output IO in parallel while multiple threads output IO in series.

What are some reasons for the discrepancies of the times or for lack of discrepancies?

- Multiple processes are slower overall because of the overhead of the forking process and more system resource requirements.

If there are differences, is it possible to make the slower one faster? How? If there were no differences, is it possible to make one faster than the other? How?

- As the number of files processed increases, the average time per file decreases. Same way as the number of directories increase, the process time for the file also increases. The time measurement was not very accurate therefore it is hard to say if either of them could be made faster.

Is mergesort the right option for a multithreaded sorting program? Why or why not?

- Mergesort is the right option for this program as there are two phases of sorting here. First each file is sorted for individual thread and second, the main combined all sorted files into one output file. Merge sort supports this two phases completely as it was easy to combine the sorted parts into one using mergesort.