

CS4402

Parallel and grid Computing

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I ran these test in WGB G21.

My implementation is not functioning 100% correctly, however most methods do work and have allowed me to test approximate parallel execution times. The problems I encountered were mostly with MPI_Is_sorted.

No. Elements	No. Processors	Total Execution Time (Secs)
1000	2	0.001263
1000	4	0.001732
1000	6	0.002460
10000	2	0.003498
10000	4	0.003724
10000	6	0.004471
100000	2	0.029049
100000	4	0.018874
100000	6	0.016828

From the table above, it can be deduced that communication overheads cause increases in execution times, when the program is applied to smaller size arrays. Performance takes a considerable hit due to this.

It is not until larger size arrays, for example of size 100000, are used that a tangible decrease in execution time is achieved.