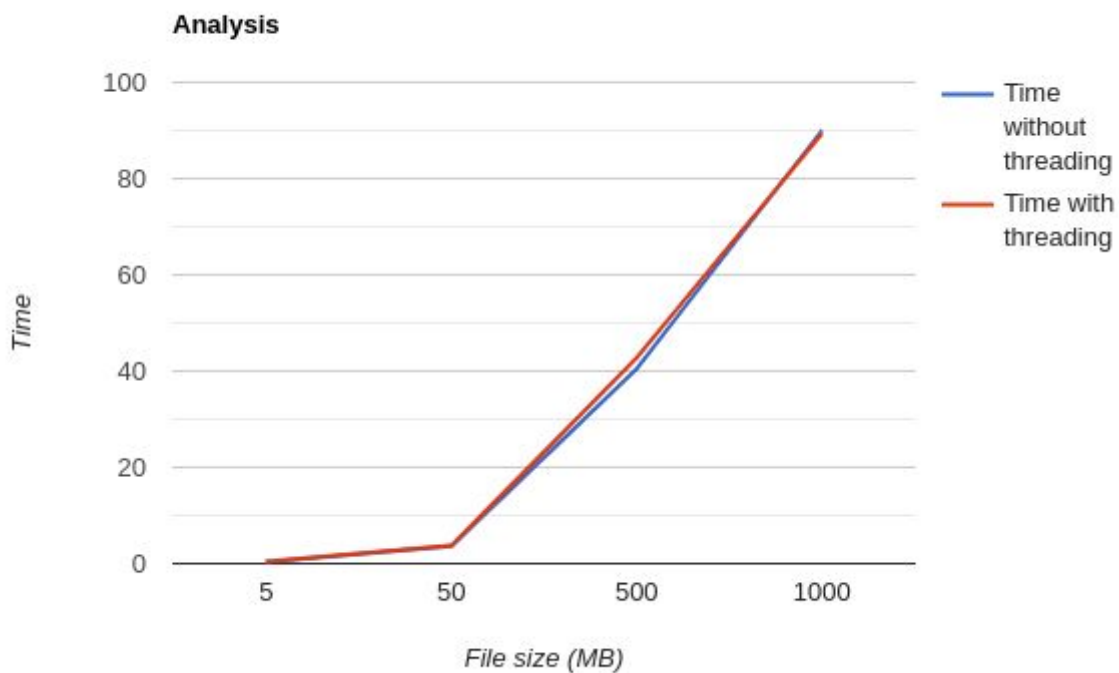DS Assignment 2 ANALYSIS
2020201092

System Configuration
8 GB RAM
Intel core i7 8th gen processor

a.

File size	Time without threading	Time with threading (No of threads=10)
5 MB	0.33287 sec	0.36758 sec
50 MB	3.5982 sec	3.71595 sec
500 MB	40.46524 sec	42.7325 sec
1 GB	89.99649 sec	89.3235 sec

Memory size for the above table was fixed (100MB)

b.

Memory size	Time without threading	Time with threading
25 MB	38.1116 sec	42.2966 sec
100 MB	34.46628 sec	38.76789 sec
250 MB	35.9645 sec	38.8627 sec
500 MB	37.3290 sec	38.29020 sec

File size for the above table was fixed(500MB)

Analysis
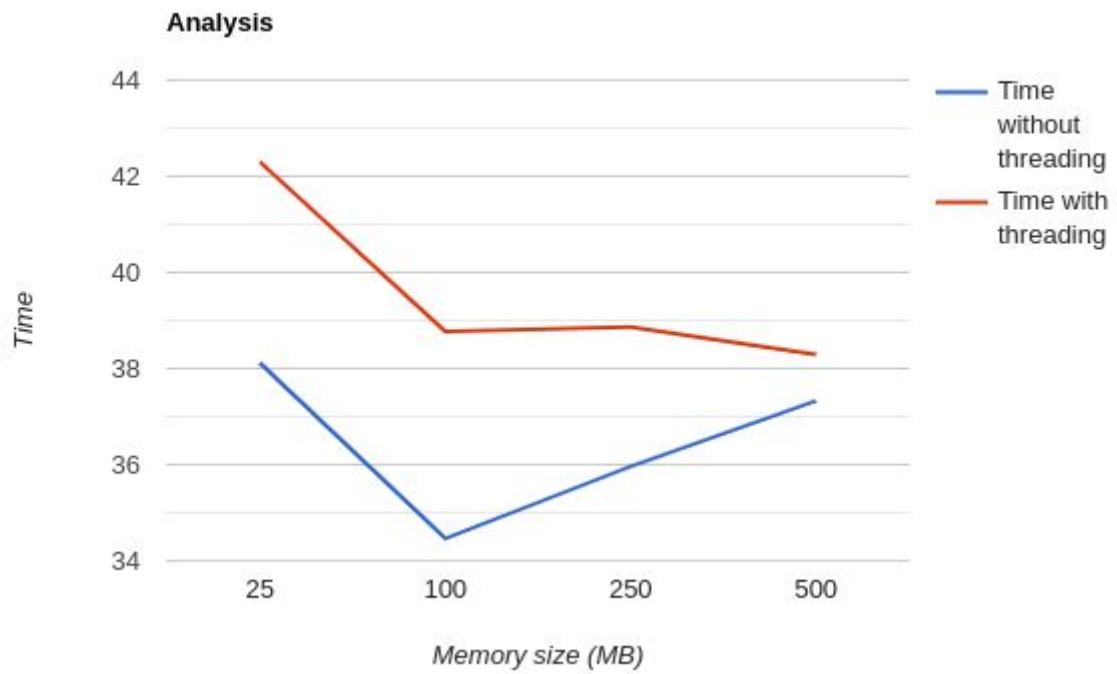
CONCLUSIONS In experiment of table 1 , we see that time with thread is more because our system is a single processor machine and so context switching of threads acts as an overhead. In the experiment of table 2, time decreases as memory size increases because less sub-files are formed and therefore merging takes less time.