

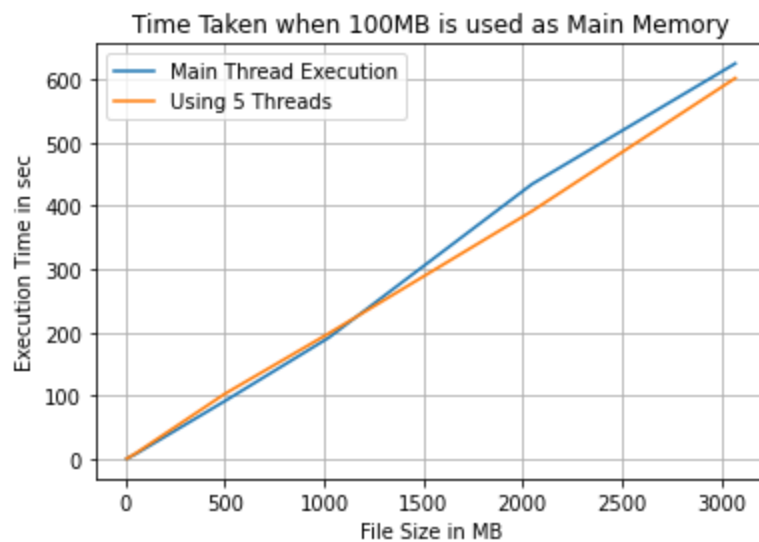
Configuration Of The System :-

- 1] RAM - 8GB
- 2] Memory - 1 TB

Observations :- (Threading is performed with 5 threads)

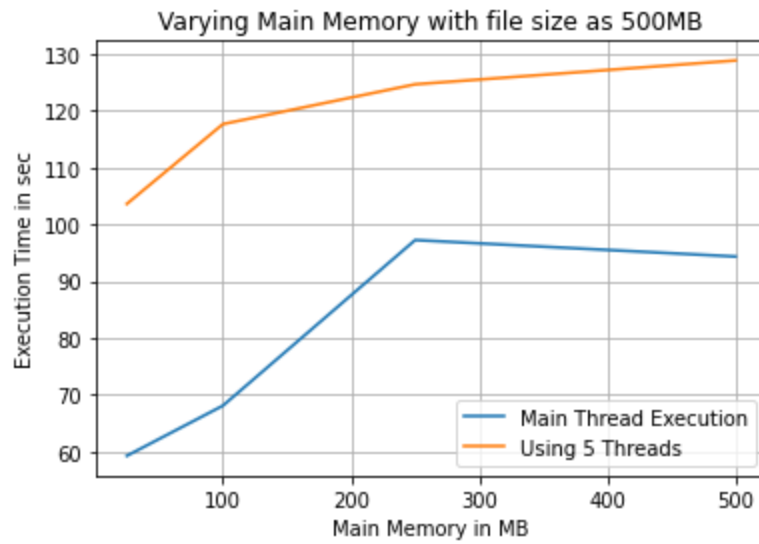
Varying FileSize with constant memory : - (Main Memory 100 MB)

File Size	Execution Time Without Threading	Execution Time With Threading
5MB	0.67 sec	0.97 sec
50MB	7.99 sec	9.23 sec
500MB	91.81 sec	103.22 sec
1GB	191.88 sec	198.66 sec
2GB	434.20 sec	391.63 sec
3GB	624.48 sec	601.39 sec



Varying Memory With Constant FileSize :- (File Size - 500MB)

Main Memory	Execution Time Without Threading	Execution Time With Threading
25MB	59.28 sec	103.61 sec
100MB	68.11 sec	117.66 sec
250MB	97.25 sec	124.66 sec
500MB	94.75 sec	128.85 sec



Explanation :-

When the file size is greater than 2 gb then , threading is effective (as we can see above) , the time taken to sort 2 gb file is less when using threads. For less than 2gb it is taking more time with threads as context switching between threads is time consuming.