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Analysis

Configuration

Quad Core i5 Processor
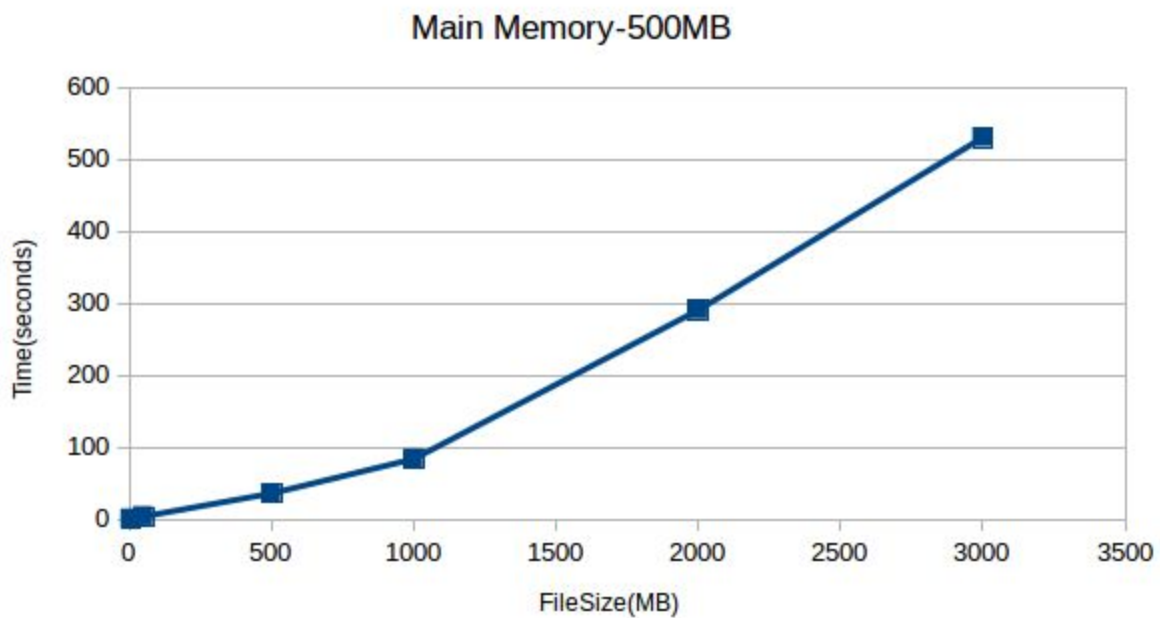Main Memory : 6 GB

Observations

Sorting done in the order of c0,c1,c2
Taken Main memory = 100MB

FILE SIZE(MB)	TIME (Real Time In Seconds)
5	0.721
50	4.150
500	36.154
1000	83.973
2000	290.712
3000	530.156

Explanation :

The increase in time is the ratio of sizes(approx) till 1GB file. From there the increase is large. This is Because Disk I/O will be done for only some files and only some part of main memory is used in second phase of merge sort.

This is the Graph for the above values :

Main Memory-500MB

File Size=512MB

MAIN MEMORY(MB)	TIME(User Time in Seconds)
25	50.848
100	45.134
250	53.153
512	612.804

FileSize-512MB

The above is the graph for the above table

Explanation for above:

Code Explanation:
1.Error Handling
2.dividing in to sublists and writing in to new created files.where max number of records is main memory size/tuplesize.this takes one disk i/o.Used merge sort to sort all the records.
3.Using filepointers got all elements in to new list.From that list finding minimum and writing to output file.Updating the list according to minimum.
Buffer size=size of one tuple.
Total Buffers=Total number of files.