

Observation and result of this category

128GB - 2 thread

```
...ersonal/MCS/Cloud Computing/Ahmed/PA2 — ubuntu@ip-172-31-6-96: ~ — ssh -i AhmedShared.pem ubuntu@ec2-52-35-230-24
ubuntu@ip-172-31-6-96:~$ make
javac *.java
java SharedMemory
||||| Share Memory MergeSort |||||

Input File: input.txt
Input File Size: 128G
Number of Thread: 2

||||| Splitting File to Chunks |||||
#### Done Splitting Files ####3243975
##### Number of chunks created: 17179869184

||||| Sorting Chunks |||||
||| Sorting Chunk by Chunk |||
Sorting Time : 6487950 ms

||||| Merging Sorted Chuncks |||||
#### Merge Completed Input File sorted successfully ####
#### Total time for Sorting Input File: 15447500 ms
```

128GB - 4 thread

```
...ersonal/MCS/Cloud Computing/Ahmed/PA2 — ubuntu@ip-172-31-6-96: ~ — ssh -i AhmedShared.pem ubuntu@ec2-52-35-230-240.us-we
ubuntu@ip-172-31-6-96:~$ make
javac *.java
java SharedMemory
||||| Share Memory MergeSort |||||

Input File: input.txt
Input File Size: 128G
Number of Thread: 4

||||| Splitting File to Chunks |||||
#### Done Splitting Files ####3318586.425
##### Number of chunks created: 8589934592

||||| Sorting Chunks |||||
||| Sorting Chunk by Chunk |||
Sorting Time : 13624695 ms

||||| Merging Sorted Chuncks |||||
#### Merge Completed Input File sorted successfully ####
#### Total time for Sortino Inout File: 22487389.18 ms
```

128GB - 8 thread

```
...ersonal/MCS/Cloud Computing/Ahmed/PA2 — ubuntu@ip-172-31-6-96: ~ — ssh -i AhmedShared.pem ubuntu@ec2-52-35-23
```

```
ubuntu@ip-172-31-6-96:~$ make
javac *.java
java SharedMemory
||||| Share Memory MergeSort |||||

Input File: input.txt
Input File Size: 128G
Number of Thread: 8

||||| Splitting File to Chunks |||||
#### Done Splitting Files ####3394913.913
##### Number of chunks created: 4294967296

||||| Sorting Chunks |||||
||| Sorting Chunk by Chunk |||
Sorting Time : 20761440.34 ms

||||| Merging Sorted Chunks |||||
#### Merge Completed Input File sorted successfully ####
#### Total time for Sorting Input File: 29534138.43 ms
```

128GB - 16 thread

```
...ersonal/MCS/Cloud Computing/Ahmed/PA2 — ubuntu@ip-172-31-6-96: ~ — ssh -i AhmedShared.pem ubun
```

```
ubuntu@ip-172-31-6-96:~$ make
javac *.java
java SharedMemory
||||| Share Memory MergeSort |||||

Input File: input.txt
Input File Size: 128G
Number of Thread: 16

||||| Splitting File to Chunks |||||
#### Done Splitting Files ####3472996.933
##### Number of chunks created: 2147483648

||||| Sorting Chunks |||||
||| Sorting Chunk by Chunk |||
Sorting Time : 46713240.643 ms

||||| Merging Sorted Chunks |||||
#### Merge Completed Input File sorted successfully ####
#### Total time for Sorting Input File: 55402687.91 ms
```

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#####
```

```
#####
```

Observation and result of this category

1TB - 2 thread

```

.../Personal/MCS/Cloud Computing/Ahmed/PA2 — ubuntu@ip-172-31-2-37: ~ — ssh -i thursdaykey.pem ubuntu@ec2-54-191-154-143.us-
ubuntu@ip-172-31-2-37:~$ make
javac *.java
java SharedMemory
Number of Thread: 2

||||| Share Memory MergeSort |||||

Input File: input.txt
Input File Size: 1024.0GB

||||| Splitting File to Chunks |||||
#### Done Splitting Files ####3557946.987
##### Number of chunks created: 137438953472

||||| Sorting Chunks |||||
||| Sorting Chunk by Chunk |||
Sorting Time : 7115892 ms

||||| Merging Sorted Chunks |||||
#### Merge Completed Input File sorted successfully ####
#### Total time for Sorting Input File: 16942600 ms

```

1TB - 4 thread

```

.../Personal/MCS/Cloud Computing/Ahmed/PA2 — ubuntu@ip-172-31-2-37: ~ — ssh -i thursdaykey.pem ubuntu@ec2-54-191-154-143.us-
ubuntu@ip-172-31-2-37:~$ make
javac *.java
java SharedMemory
Number of Thread: 4

||||| Share Memory MergeSort |||||

Input File: input.txt
Input File Size: 1024.0GB

||||| Splitting File to Chunks |||||
#### Done Splitting Files ####3639778.453
##### Number of chunks created: 68719476736

||||| Sorting Chunks |||||
||| Sorting Chunk by Chunk |||
Sorting Time : 13449035.88 ms

||||| Merging Sorted Chunks |||||
#### Merge Completed Input File sorted successfully ####
#### Total time for Sorting Input File: 23169513.708 ms

```

1TB - 8 thread

```

.../Personal/MCS/Cloud Computing/Ahmed/PA2 — ubuntu@ip-172-31-2-37: ~ — ssh -i thursdaykey.pem
ubuntu@ip-172-31-2-37:~$ make
javac *.java
java SharedMemory
Number of Thread: 8

||||| Share Memory MergeSort |||||

Input File: input.txt
Input File Size: 1024.0GB

||||| Splitting File to Chunks |||||
### Done Splitting Files ###3723493.669
##### Number of chunks created: 34359738368

||||| Sorting Chunks |||||
||| Sorting Chunk by Chunk |||
Sorting Time : 39848995.298 ms

||||| Merging Sorted Chunks |||||
### Merge Completed Input File sorted successfully ###
### Total time for Sorting Input File: 49379459.094 ms

```

1TB - 16 thread

```

.../Personal/MCS/Cloud Computing/Ahmed/PA2 — ubuntu@ip-172-31-2-37: ~ — ssh -i thursdaykey.pem ubuntu@ec2-54-191-1!
ubuntu@ip-172-31-2-37:~$ make
javac *.java
java SharedMemory
Number of Thread: 16

||||| Share Memory MergeSort |||||

Input File: input.txt
Input File Size: 1024.0GB

||||| Splitting File to Chunks |||||
### Done Splitting Files ###3896744.178
##### Number of chunks created: 17179869184

||||| Sorting Chunks |||||
||| Sorting Chunk by Chunk |||
Sorting Time : 84679114.890 ms

||||| Merging Sorted Chunks |||||
### Merge Completed Input File sorted successfully ###
### Total time for Sorting Input File: 94125548.839 ms

#####

```