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**PSA**

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**Assignment 5: Parallel Sorting**

**Tasks To DO:-**

Experimenting with:-

1)Changing the array size.

2)Try changing the thread count.

3)And also change the cutoff value as well.

**Output and Graphical Representation:-**

Array Size = 1000000

Graphical user interface, text, application, email

Description automatically generated

Array Size = 3000000

Graphical user interface, text, application

Description automatically generated

Array Size 50000

Graphical user interface, text, application, email

Description automatically generated

**Conclusion : -**

1. By looking at the data we can conclude that after changing the threads, more than 4 threads aren’t making any significant performance improvement even thought we change the array size. But in this above case where array size is 5000, we can see that 4 threads is hampering some performance. But we can see that 8 threads are optimum for all array sizes.
2. The optimal value for cutoff is approx. 20% of the array size which can be observed in the graph.
3. So the optimum value of thread and cutoff value can be said as 8 threads and 20% of array size.