Assignment – 5
Program Structure and Algorithms
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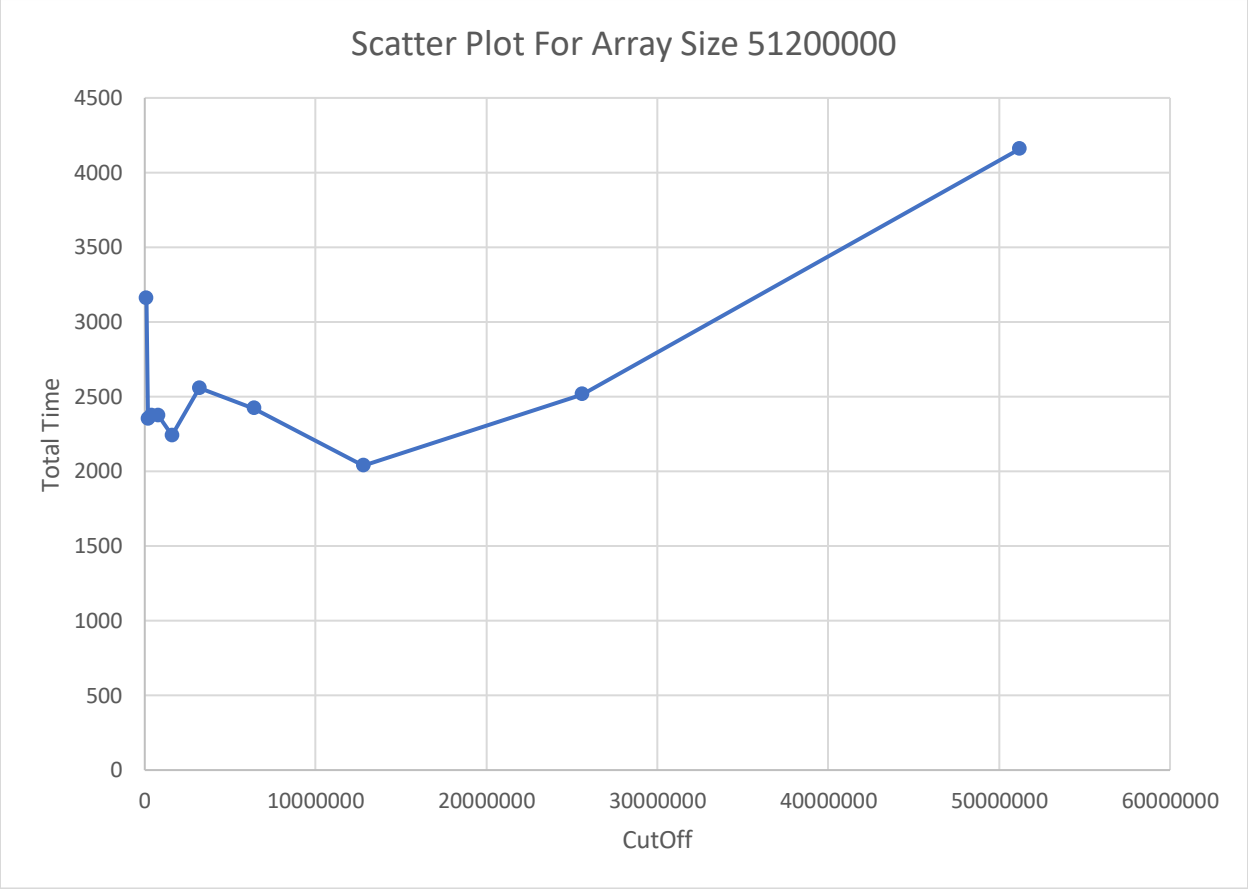
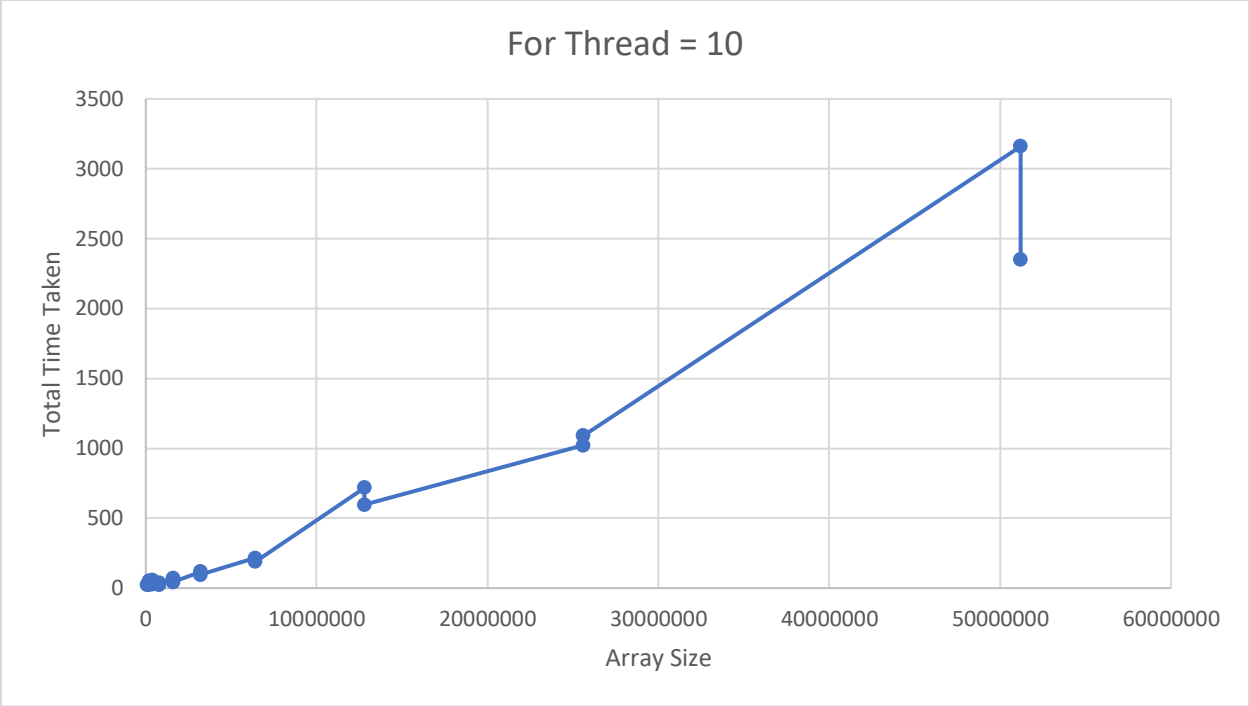
I. Introduction–

The moto of the assignment was to understand the multithreading sort. I've done this sorting using merge sort, as it consists of distinct segments that can be processed in parallel then merged together. I've assumed a size of the array is N and cutoff size is C.

II. Observations/Conclusions – •





- For all graphs in fig 1 and fig 2, the growth of time v/s size of the array is NlgN.
- The time taken to sort on a single thread decreases as cutoff size increases fig 1.
- However, since the processor used has only 4 threads, using a pool of 10 threads doesn't improve the performance and, in some cases, even degrades it as the thread overhead is increased without increase in multiprocessing.