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Comps- A - A.

Experiment 2 : Divide and conquer approach
            - merge and quick sort

In this experiment, I analysed and compared the performance of quicksort and mergesort.

Methodology:

• Generated 100,000 random numbers using rand() function and stored in a file.

• Divided into blocks [0 - 100],[0 - 200], - - - .

Quicksort: we select a pivot element and partition array into two subarrays elements less than pivot go to left and rest go to right and recursively apply quicksort.

Merge sort: we divide array into two halves, sort them recursively, and merge back in a sorted order by merging them in a sorted order.

Both algorithms have a time complexity of O(nlogn) and O(n) stack space (recursive)