Sorting

Additional Documents

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Sorting is a method where you can arrange the given data set into either ascending or descending order. There are numerous ways to achieve this. Sorting can be categorized into two parts comparison-based sorting and non-comparison based sorting.

You will implement several sorting techniques which are implemented on Array. All the sorting techniques are implemented using python. Here you can find out the running time complexity for each of the sorting techniques such as merge sort, quick sort, insertion sort, bubble sort, selection sort.

You will also learn about non-comparison based sorting such as radix sort, bucket sort, count sort, and their running time complexity.

Running time analysis:

Technique	Best case	Average Case	Worst Case
Merge sort	O(n*log(n))	O(n*log(n))	O(n*log(n))
Quick sort	O(n*log(n))	O(n*log(n))	O(n^2)
Insertion sort	O(n^2)	O(n)	O(n^2)
Selection sort	O(n^2)	O(n^2)	O(n^2)
Bubble sort	O(n^2)	O(n^2)	O(n^2)
Radix sort	O(nk)	O(nk)	O(nk)
Count sort	O(n+k)	O(n+k)	O(n+k)
Bucket sort	O(n+k)	O(n+k)	O(n^2)

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