Welcome to Our Presentation

Comparative Study Between Quick Sort and Marge Sort

Group Members.

Name: Mahmodul Hasan

ID: 191-15-12933

Name: Tariqul Islam Ricky

ID: 191-15-12963

Introduction.

An algorithm is a well define process to solve any problem. It takes some data as a input and make a output with these data. In mathematics and computer science, an algorithm usually means a logical image of the commands which must be performed significant activity. The main factor of analysis of algorithm is to study about time and space and their relationship between the algorithms necessities and number of elements or items being executed or processed. Generally sorting is the method of reorganizing a given set of data and objects within a particular arrangement.

Marge Sort

Marge Sort(arr[],l,r)

{

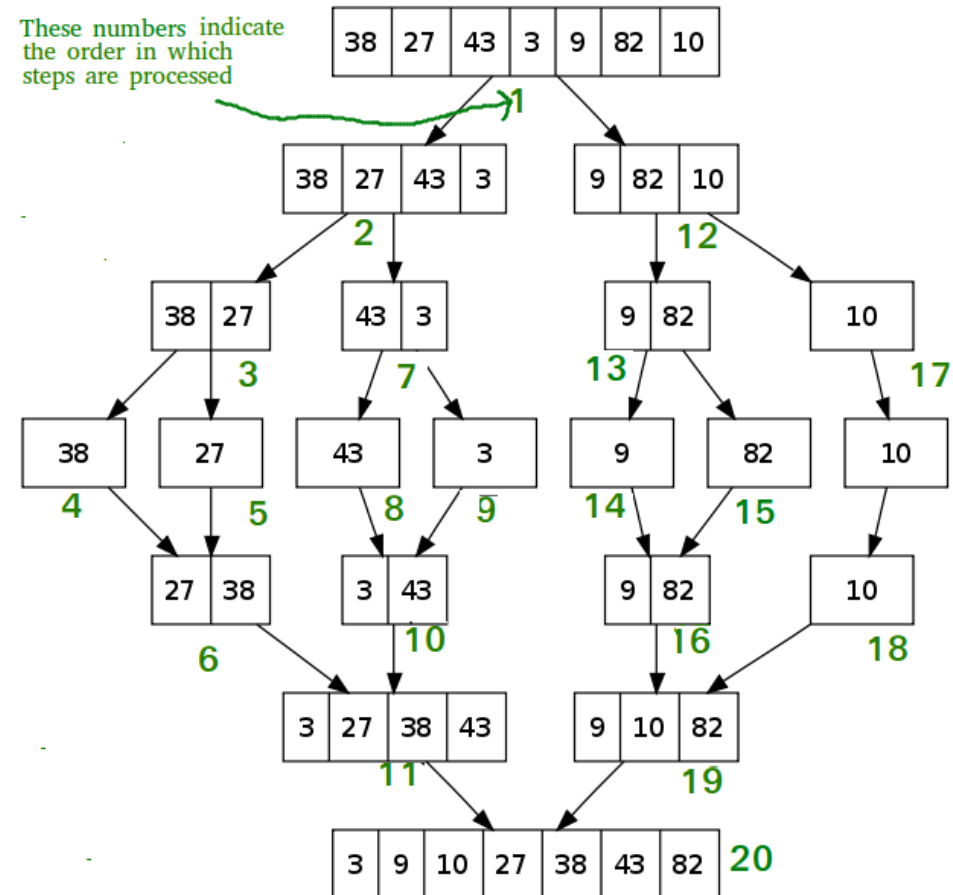Middle point m= (l+r)/2

Marge Sort (arr,l,m) //Call for first half

If(r>f)

 Marge Sort(arr[],l,r){

Marge Sort (arr,m+1,r) //call for second half

Marge Sort(arr,l,m,r) // Marge the two parts
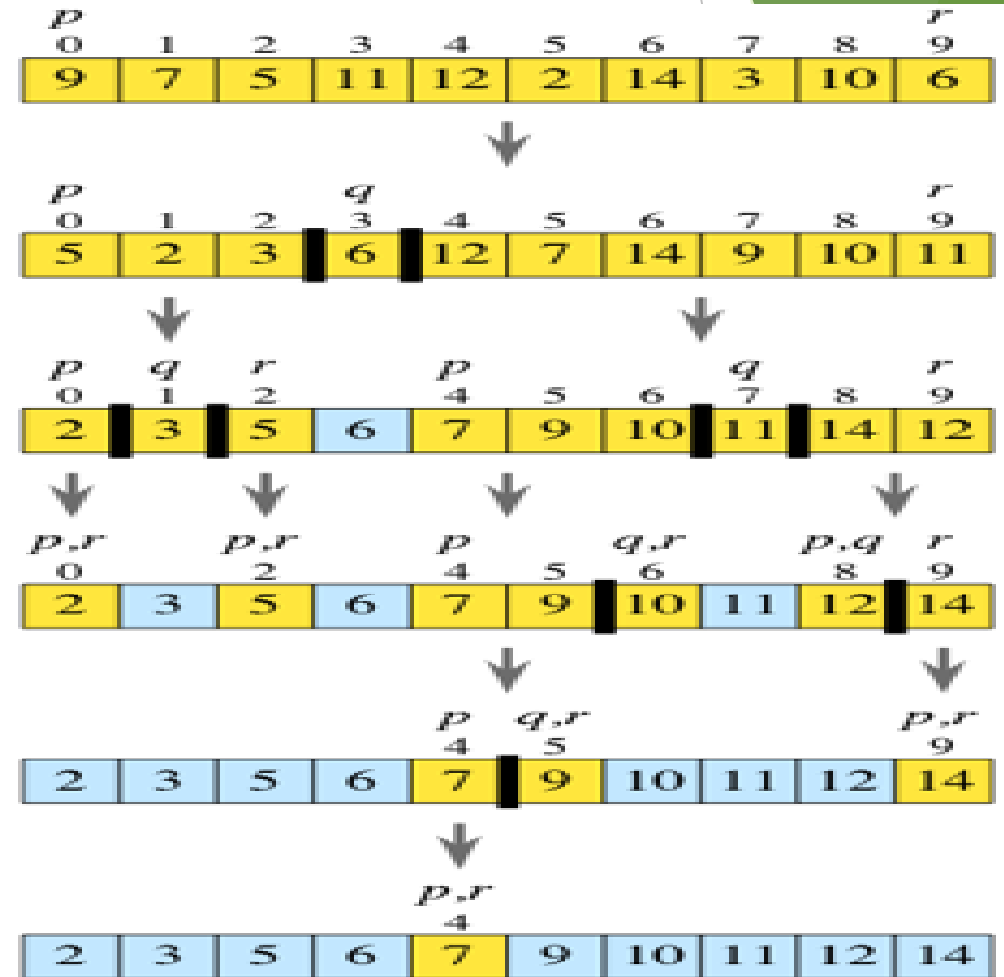
}

Quick Sort

QuickSort (arr [], low, high){

If(low<high){

Pi= partition (arr, low, high);//partitioning index. Arr[i]

Quicksort(arr,low,pi-1);//before index

Quicksort(arr,pi+1,high);//After index

}

}

Quick Sort VS Marge Sort

**Time
complexity**

Quick Sort
Best Case: O(n log n)
Average case: O(n log n)
Worst Case: $O(n^2)$

Marge Sort
Best Case: O(n log n)
Average case: O(n log n)
Worst Case: O(n log n)

Works Well

Quick Sort
It works well in small array.

Marge Sort
It works well in any size of array.

Quick Sort VS Marge Sort

Speed Excision

Quick Sort
It work faster than other sorting algorithms for small data set like Selection sort etc.

Marge Sort
It has a consistent speed on any size of data.

Efficiency

Quick Sort
Working fast in small array.

Marge Sort
Working fast in large array.

Quick Sort VS Marge Sort

Sorting Method

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Quick Sort
Internal sorting method. Use main memory.

Marge Sort
External sorting method. Need external memory.

Preferred For

Quick Sort
Preferred for array

Marge Sort
Preferred for link list.

Thank You.