What is internal sorting?

What is the worst-case time complexity of quicksort? Sort the following data using the quicksort algorithm:

20, 50, 45, 36, 8, 90, 85, 34

Differentiate between external sorting and internal sorting.

What is insertion Sort? Perform the insertion sort in the following data: 14, 33, 27, 10, 35, 19, 42, 44

Briefly describe selection sort. Show different passes required to perform selection sort on the following list of numbers: 76, 32, 43, 10, 87, 21, 65, 54

What is sorting? Sort the following data using insertion sort algorithm:

14, 33, 27, 10, 35, 19, 42, 44 in ascending order.

Why external sorting is slower than internal sorting?

Define sorting. Write a recursive algorithm for quick sort and trace the algorithm for following data.

35, 22, 10, 3, 48, 29, 6, 42, 8, 75

What do you mean by internal and external sorting?

What do you mean by adaptive and non-adaptive sorting?

Differentiate internal and external sorting. Consider the following max heap: 50, 30, 20, 15, 10, 8, 16. Insert a new node with value 60. [2+6]

Why do you need external sorting?

Sort the following elements using max heap and also analyze its computational complexity:

42, 36, 56, 27, 63, 72, 62, 15

Define stability and efficiency of sorting algorithms. Sort given data using radix sort.

Explain selection sort.

Define binary search with an example.

Sort the numbers 92, 73, 22, 49, 46, 98, 21, 9, 70, 63 using selection sort.

Compare sequential search with binary search.

Explain shell sort. Sort the numbers 92, 83, 22, 49, 36, 98, 12, 9, 70, 51 using shell sort.

Explain selection sort. Sort the data sequence 40, 90, 20, -10, 30, 5, 60, 100, 80 using selection sort.

Provide the best case, average case, and worst case for the following algorithms in Big-Oh: bubble sort, insertion sort, merge sort, and selection sort. Construct a heap sort for the following given list with an algorithm:

37, 33, 26, 92, 57, 18, 48, 25, 12, 86, 42, 22

Explain a binary search with an example. Consider a hash table of size 10. Using linear probing, insert the keys 62, 37, 36, 44, 67, 91, 82, and 107.

Define a radix sort with its algorithm. Trace the steps to sort the following set of data using merge sort:

85, 76, 46, 92, 30, 41, 12.

How can you compare either two sorting or two searching algorithms?

Create the heap structure from the following sequence data and sort them using heap sort:

12, 10, 1, 14, 6, 5, 8, 15, 3, 9, 7, 4, 11, 13, 2

Define internal and external sorting. Write an algorithm for quick sort and trace your algorithm for a given sequence of data 5, 43, 99, 20, 45, 7, 6, 63, 92,4.

What is internal and external sorting? Write an algorithm for shell sort.