

Data Structure Assignment 1

1. what is ADT? Enlist its different advantages.

2. Define the following terms:

- Data Type
- Data Object
- Time Complexity
- Space Complexity
- Big-Oh Notation
- Omega Notation
- Algorithm

3. What is Data Structure? Explain different operations performed on data structure.

4. Sort the following numbers using bubble sort method :

108, 3, 97, 65, 71, 23, 57, 93, 100

5. Write algorithm for merge sort.

6. Explain linear searching techniques in details.

7. Explain Insertion sort algorithm with time complexity.

8. Define the terms:

- Array
- Pivot
- Sort stability
- Internal sort
- External sort

9.Sort the given array using quick sort :

35,45,42,57,26

10.Explain the row-major representation of an array.

11.Sort the given array using Insertion sort :

22,14,25,10,5

12. Sort the given array using Merge sort :

38,27,43,3,9,82,10