Vidush Somany Institute of Technology & Research, Kadi

CE / CSE / IT (3ʳᵈ Semester)

Subject – Data Structures and Algorithms (CT303-N)

Assignment-4

1) Write an algorithm for selection sort and sort the following elements.

   77, 33, 44, 11, 88, 22, 66, 55

2) Write a 'C' program for selection sort.

3) Compare sequential and binary search methods.

4) Write an algorithm for quick sort and apply quick sort for the following data:

   9, 7, 5, 11, 12, 2, 14, 3, 10, 6

5) Examine the algorithm for Insertion sort and sort the following array:

   77, 33, 44, 11, 88, 22, 66, 55

6) Search the number 50 from the given data using binary search technique. Illustrate the searching process. 10, 14, 20, 39, 41, 45, 49, 50, 60

7) Write algorithm for Merge sort method and apply merge sort algorithm to the following elements. 20, 10, 5, 15, 25, 30, 50, 35

8) Write a 'C' program for bubble sort.

9) Write algorithm for Bubble sort method and apply bubble sort algorithm on following elements. 10, 5, 3, 20, 15, 25, 17, 60

10) Explain linear search algorithm with an example.

11) Explain binary search algorithm with an example.

12) Write an algorithm for Heap sort and sort the following data using heap sort. 20, 65, 43, 53, 78, 10, 78, 40, 39, 29