LAB-II

Date: **Aug 08, 2024**.

1. Given an array A having n integers. Write a program to INSERT a number at a given location in the array A. What is the running time?

   Sample Input: First line denote the size of A; second line denotes the elements of A; third line denotes the number to be inserted; and fourth line denotes the position at which the number has to be inserted. What is the running time?

   5
   3 1 5 4 2
   9
   2
   Output: 3 9 1 5 4 2

2. Given an array A having n integers. Write a program to DELETE a number at a given location in the array A.

   Sample Input: First line denote the size of A; second line denotes the elements of A; and third line denotes the position from which the number has to be deleted.

   5
   3 1 5 4 2
   3
   Output: 3 1 4 2

3. Repeat the above two questions by replacing the array with single linked list. What is the running time.

4. Given two SORTED arrays A and B having n_1 and n_2 integers respectively. Write a program to merge A and B to form a new sorted array C. What is the running time.

   Sample Input 1: First line denote the size of A and the second line denotes the elements of A. Third line denote the size of B and the fourth line denotes the elements of B.

   6
   1 3 4 5 7 9
   3
   3 6 9
   Output: 1 3 3 4 5 6 7 9 9