**214189E – SENARATHNA G.G.P.C.**

**IN 111 – Data Structures and Algorithm 1**

**Lab sheet – 01**

**01)**

#include <stdio.h>  
  
void add\_ele(int ,int arr[] );  
  
void main(){  
 int arr1[] = {10,14,20,34,45,8,4,3,23}; //This is a first array,  
 int n;  
  
 n = sizeof(arr1)/sizeof(arr1[0]) + 1; //calculate the new array size,  
  
 add\_ele(n ,arr1);  
}  
  
void add\_ele(int x,int arr[] ){  
 int arr2[x]; //This is a second array,  
 int m,j = 0;  
  
 printf("What is the position, do you want to add element: ");  
 scanf("%d", &m);  
  
 for(int i = 0;i < x;i++){  
 if(i == m-1){  
 printf("Input the %d position element: ", (i+1)); //index start in 0 and position start in 1,  
 scanf("%d", &arr2[i]);  
 }  
 else {  
 arr2[i] = arr[j];  
 j++;  
 }  
 }  
 for(int i = 0;i < x;i++){  
 printf("%d ", arr2[i]);  
 }  
}

**02)**

#include <stdio.h>  
  
void del\_ele(int ,int arr[] );  
  
void main(){  
 int arr1[] = {10,14,20,34,45,8,4,3,23}; //pre-define array,  
 int n;  
  
 n = sizeof(arr1)/sizeof(arr1[0]) - 1; //size of the new array,  
  
 del\_ele(n ,arr1 );  
}  
  
void del\_ele(int x,int arr[] ){  
 int arr2[x]; //new array,  
 int j = 0,m;  
  
 printf("What is the position, do you want to add an element: "); //position must 1 point more than index,  
 scanf("%d", &m);  
  
 for(int i = 0;i < x;i++){  
 if(i == m-1){  
 j++;  
 arr2[i] = arr[j];  
 j++;  
 }  
 else {  
 arr2[i] = arr[j];  
 j++;  
 }  
 }  
 for(int i = 0;i < x;i++){  
 printf("%d ", arr2[i]);  
 }  
}