Assignment No.2 (Data Structure and Algorithms)

**Question 1 :**

**Write the program for deleting an element from the beginning and for any position.**

**Ans-->**

**#include <stdio.h>**

**void display(int arr[], int n)**

**{**

**for (int i = 0; i < n; i++)**

**{**

**printf("%d ", arr[i]);**

**}**

**printf("\n");**

**}**

**void indDeletion(int arr[], int size, int index)**

**{**

**for (int i = index; i < size-1; i++)**

**{**

**arr[i] = arr[i + 1];**

**}**

**}**

**int main()**

**{**

**int arr[100] = {7, 8, 12, 27, 88};**

**int size = 5, element = 45, index = 0;**

**display(arr, size);**

**indDeletion(arr, size, index);**

**size -= 1;**

**display(arr, size);**

**return 0;**

**}**

**Question 2:**

**Write the program for printing the array after rotating it k times toward left, where k would be taken as user input.**

**Ans:**

**#include <stdio.h>**

**#include <conio.h>**

**int leftrotate(int \*a,int n,int k)**

**{**

**int i,j,temp;**

**for(i=0; i<k; i++)**

**{**

**temp=a[0];**

**for(j=0; j<n-1; j++)**

**{**

**a[j]=a[j+1];**

**}**

**a[n-1]=temp;**

**}**

**}**

**print(int \*a,int n)**

**{**

**int i;**

**for(i=0; i<n; i++)**

**{**

**printf("%d ",a[i]);**

**}**

**}**

**int main()**

**{**

**int a[1000],i,n,j,k,temp;**

**printf("Enter size of the array : ");**

**scanf("%d", &n);**

**printf("Enter elements in array : ");**

**for(i=0; i<n; i++)**

**{**

**scanf("%d",&a[i]);**

**}**

**printf("how many times left rotate : ");**

**scanf("%d", &k);**

**leftrotate(a,n,k)**

**printf("\narray elements after left rotate : ");**

**print(a,n);**

**}**