DAY-2 ASSIGNMENT | 25th December, 2020

1.Problem Statement:
Write the program for deleting an element from the beginning and from any position.

Program in C:
```c
#include<stdio.h>
int main()
{
    int a[100], pos, c, n;
    printf("Enter the size of array:");
    scanf("%d", &n);
    printf("Enter %d elements: ", n);
    for(c = 0; c < n; c++)
        scanf("%d", &a[c]);
    printf("Enter the position to delete: ");
    scanf("%d", &pos);
    if(pos >= n+1)
        printf("Deletion not possible");
    else
        for(c = pos-1; c < n-1; c++)
        a[c] = a[c+1];
    printf("Array after deletion is: ");
    for(c = 0; c < n-1; c++)
        printf("%d  ", a[c]);
    return 0;
}
```

Output:
In the beginning:

```
Enter the size of array:4
Enter 4 elements: 1 5 2 7
Enter the position to delete: 1
Array after deletion is: 5  2  7
```

At any position(Here 5):

```
Enter the size of array:5
Enter 5 elements: 74 85 9 1 74
Enter the position to delete: 5
Array after deletion is: 74  85  9  1
```

2.Problem Statement:
Write the program for printing the array after rotating it k times towards left, where k would be taken as user input.

Program in C:
```c
#include <stdio.h>
#include <stdlib.h>
void leftrotateone(int arr[], int n){
    int z,i,j;
    z= arr[0];
    for(i=0;i<n-1;i++){
        arr[i]=arr[i+1];
    }
        arr[i]=z;
}
void leftrotate(int arr[], int n, int k){
    int i,j;
    for(i=0; i<k; i++){
        leftrotateone(arr , n);
    }
}
void printarray(int arr[], int n){
    int x;
    for(x=0;x<n;x++)
    {
        printf("%d ",arr[x]);
    }
}
int main()
{
    int k,a_i,n;
    printf("Enter size of array: ");
    scanf("%d",&n);
    printf("Enter number of rotation: ");
    scanf("%d",&k);
    int *a = malloc(sizeof(int) * n);
    for(a_i = 0; a_i < n; a_i++){
        printf("Enter element %d : ",a_i+1);
        scanf("%d",&a[a_i]);
    }
    leftrotate(a,n,k);
    printf("Left shifted array by %d rotation is: " ,k);
    printarray(a, n);
    return 0;
}
```

Output:

```
Enter size of array: 5
Enter number of rotation: 3
Enter element 1 : 74
Enter element 2 : 85
Enter element 3 : 24
Enter element 4 : 3
Enter element 5 : 1
Left shifted array by 3 rotation is: 3 1 74 85 24
```