Assaignment-3

Question 1

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

```
#include <iostream>
using namespace std;
int main()
{
int arr[5] = {}; //1
cout<<"Enter 5 elements\n"; //2
for(int i=0;i<5;i++)
{
cin>>arr[i];
}
int ind, maxsize=5; //3
cout<<"Enter index to be deleted\n"; //4
cin>>ind;
if(ind<0 || ind>=maxsize) //5
{
cout<<"Invalid\n";
}
else
{
for(int i=ind;i<=maxsize-1;i++)
{
arr[i]=arr[i+1];
}
arr[maxsize-1]={};
}
cout<<"Array is:\n"; //6
for(int i=0;i<5;i++)
{
if(arr[i]!='\0')
cout<<arr[i]<<" ";
}
}
```

Question 2:

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

```
#include <bits/stdc++.h>
using namespace std;
int gcd(int a, int b)
{
if (b == 0)
return a;
else
return gcd(b, a % b);
}
void leftRotate(int arr[], int d, int n)
{
d = d % n;
int g_c_d = gcd(d, n);
for (int i = 0; i < g_c_d; i++) {
int temp = arr[i];
int j = i;
while (1) {
int k = j + d;
if (k >= n)
k = k - n;
if (k == i)
break;
arr[j] = arr[k];
j = k;
}
arr[j] = temp;
}
}
void printArray(int arr[], int size)
{
for (int i = 0; i < size; i++)
cout << arr[i] << " ";
}
int main()
{
int arr[] = { 1, 2, 3, 4, 5, 6, 7 , 8 , 9 , 10 , 11 , 12 , 13 };
int n = sizeof(arr) / sizeof(arr[0]);
int k;
cout<<"Enter k"<<endl;
cin>>k;
leftRotate(arr, k, n);
printArray(arr, n);
return 0;
}
```