Assignment:16

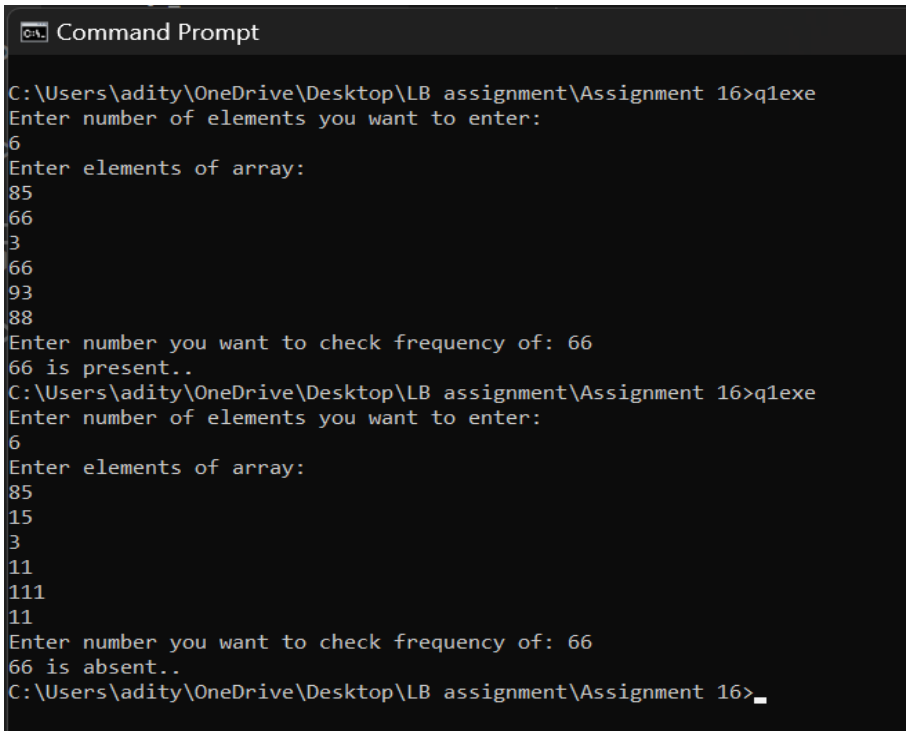
Q.1 Accept n numbers and a single number and check the number is present or not.

Ans.

```c
#include<stdio.h>
#include<stdlib.h>
#include<stdbool.h>

bool CheckNum(int Arr[],int iSize,int iNo)
{
    int iCnt=0,iFreq=0;

    for(iCnt=0;iCnt<iSize;iCnt++)
    {
        if(Arr[iCnt]==iNo)
       {
        iFreq+=1;
        break;
       }
    }

    if(iFreq==1)
    {
        return true;
    }
    else
    {
        return false;
    }
}

int main()
{
    int *ptr=0;
    int iLength=0,iCnt=0,iNo=0;

    printf("Enter number of elements you want to enter:\n");
    scanf("%d",&iLength);
```

```
    ptr=(int*)malloc(sizeof(int)*iLength);

    printf("Enter elements of array:\n");
    for(iCnt=0;iCnt<iLength;iCnt++)
    {
        scanf("%d",&ptr[iCnt]);
    }

    printf("Enter number you want to check frequency of: ");
    scanf("%d",&iNo);

    bool bRet=CheckNum(ptr,iLength,iNo);

    if(bRet==true)
    {
        printf("%d is present..",iNo);
    }
    else
    {
        printf("%d is absent..",iNo);
    }

    free(ptr);
    return 0;
}
```

OUTPUT:



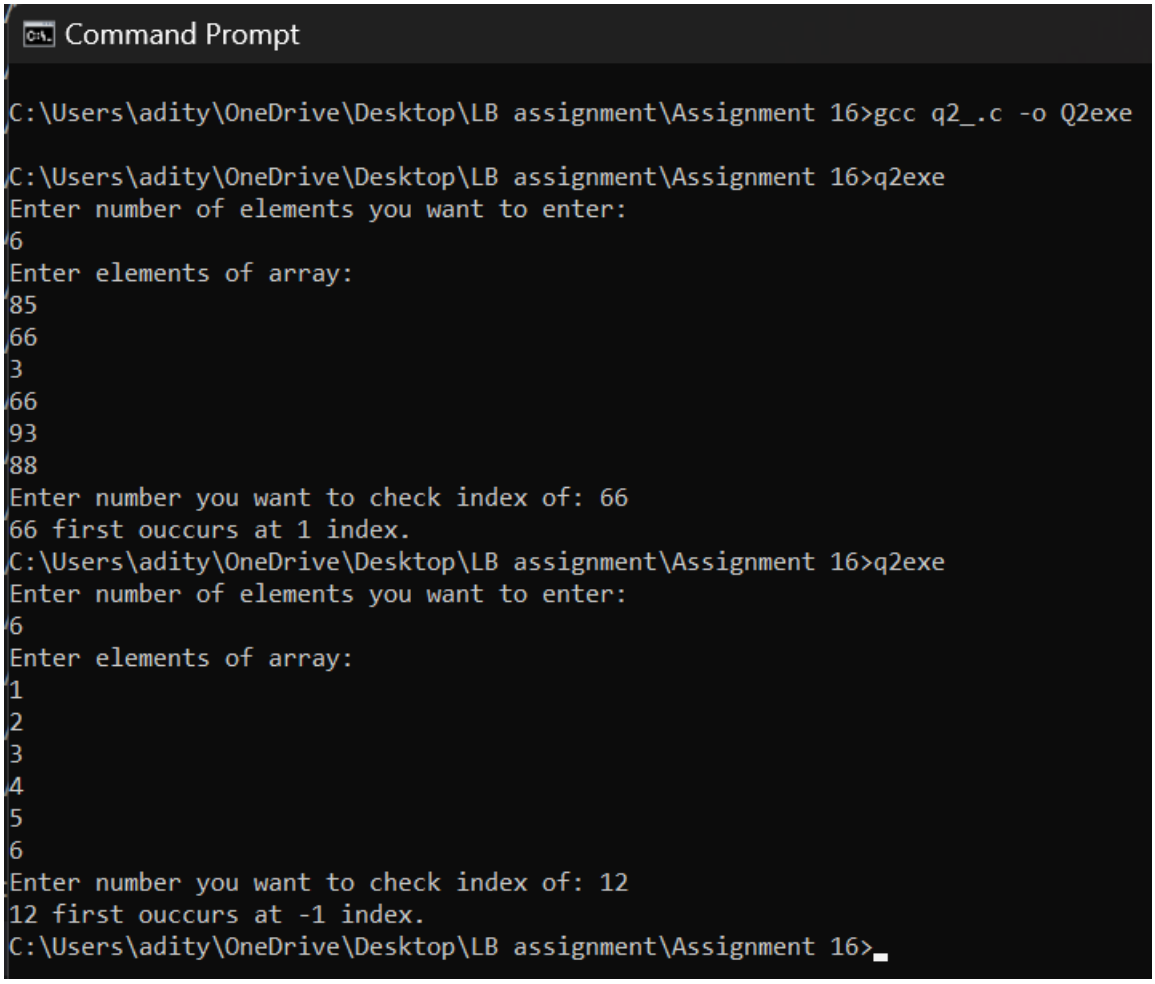
Q.2 Accept n numbers and a single number and return first occurring index of that number.

Ans.

```c
#include<stdio.h>
#include<stdlib.h>

int CheckIndex(int Arr[],int iSize,int iNo)
{
    int iCnt=0,iIndex=-1;

    for(iCnt=0;iCnt<iSize;iCnt++)
    {
        if(Arr[iCnt]==iNo)
        {
            iIndex=iCnt;
            break;
        }
    }
    return iIndex;
}

int main()
{
    int *ptr=0;
    int iLength=0,iCnt=0,iNo=0;

    printf("Enter number of elements you want to enter:\n");
    scanf("%d",&iLength);

    ptr=(int*)malloc(sizeof(int)*iLength);

    printf("Enter elements of array:\n");
    for(iCnt=0;iCnt<iLength;iCnt++)
    {
        scanf("%d",&ptr[iCnt]);
    }

    printf("Enter number you want to check index of: ");
    scanf("%d",&iNo);

    int iRet=CheckIndex(ptr,iLength,iNo);

    printf("%d first ouccurs at %d index.", iNo,iRet);
```

```
    free(ptr);
    return 0;
}
```

OUTPUT:



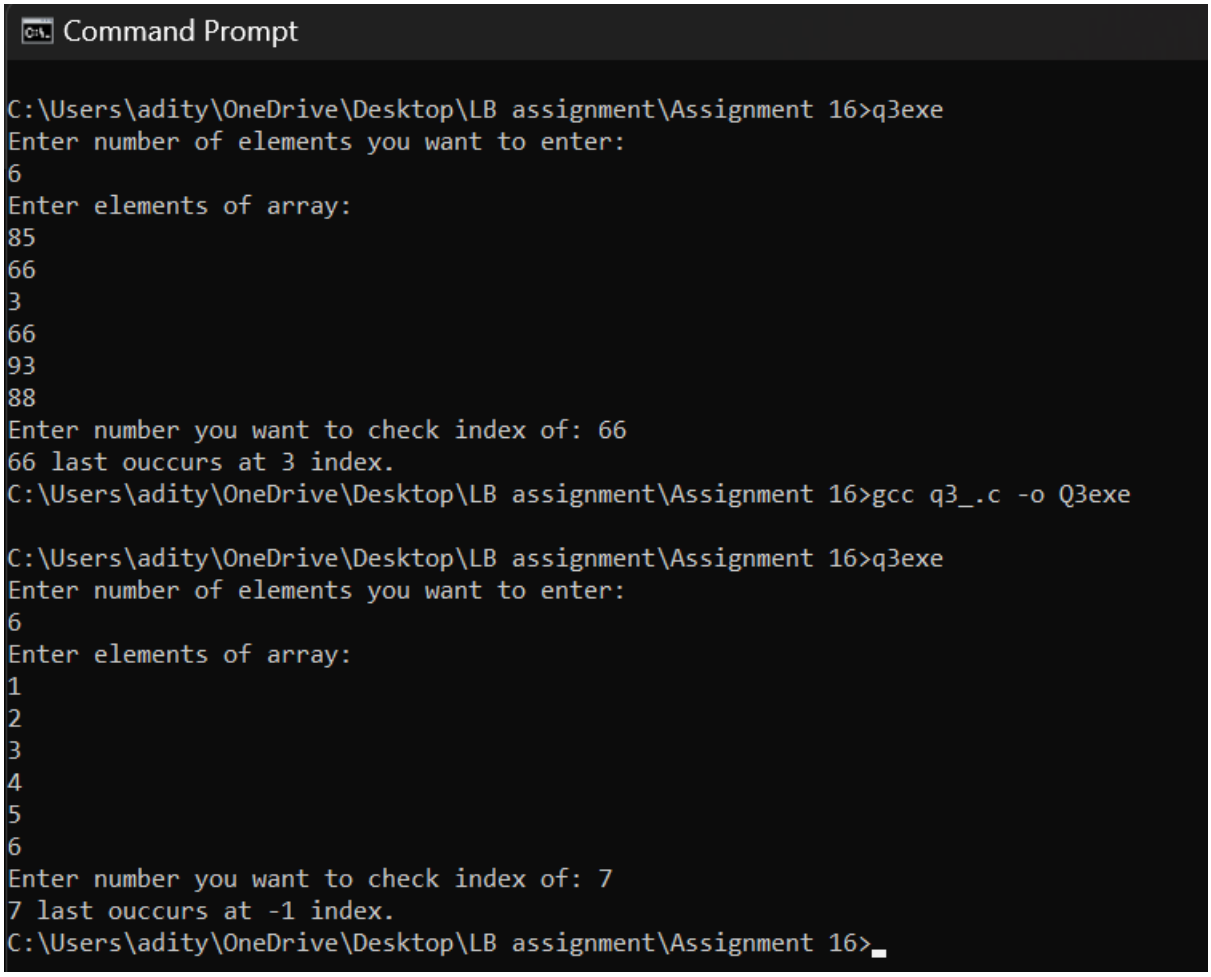
Q.3 Accept n numbers and a single number and return last occuring index of that number.

Ans.

```
#include<stdio.h>
#include<stdlib.h>

int CheckIndex(int Arr[],int iSize,int iNo)
{
```

```
    int iCnt=0,iIndex=-1;

    for(iCnt=iSize;iCnt>0;iCnt--)
    {
        if(Arr[iCnt]==iNo)
        {
            iIndex=iCnt;
            break;
        }
    }
    return iIndex;
}

int main()
{
    int *ptr=0;
    int iLength=0,iCnt=0,iNo=0;

    printf("Enter number of elements you want to enter:\n");
    scanf("%d",&iLength);

    ptr=(int*)malloc(sizeof(int)*iLength);

    printf("Enter elements of array:\n");
    for(iCnt=0;iCnt<iLength;iCnt++)
    {
        scanf("%d",&ptr[iCnt]);
    }

    printf("Enter number you want to check index of: ");
    scanf("%d",&iNo);

    int iRet=CheckIndex(ptr,iLength,iNo);

    printf("%d last ouccurs at %d index.", iNo,iRet);

    free(ptr);
    return 0;
}
```

OUTPUT:



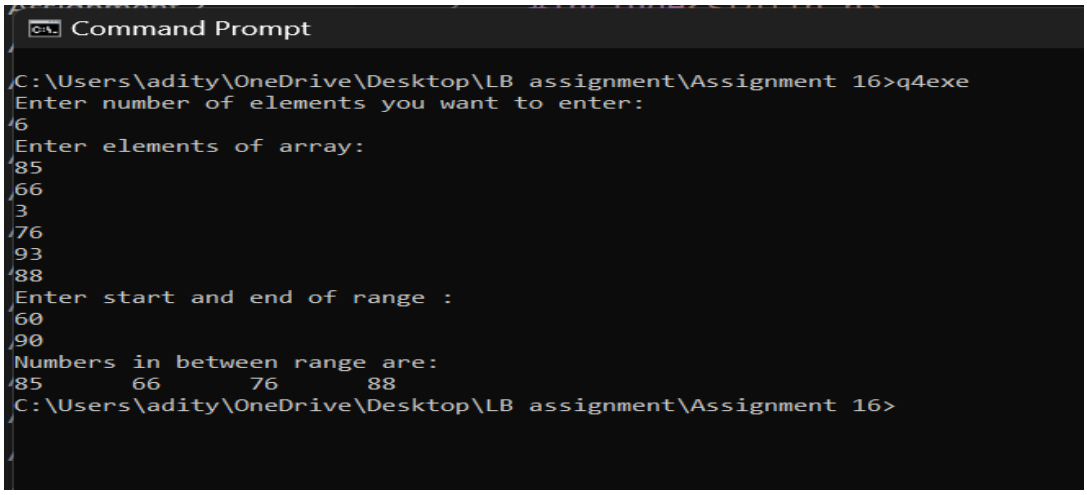
Q.4 Accept n numbers and range from user display, numbers of array in between that range.

Ans.

```c
#include<stdio.h>
#include<stdlib.h>

void CheckInRange(int Arr[],int iSize,int iStart,int iEnd)
{
    int iCnt=0,iR=0;

    printf("Numbers in between range are:\n");
    for(iCnt=0;iCnt<iSize;iCnt++)
    {
        for(iR=iStart;iR<=iEnd;iR++)
```

```
        if(Arr[iCnt]==iR)
        {
          printf("%d\t",Arr[iCnt]);
        }
    }
}

int main()
{
    int *ptr=0;
    int iLength=0,iCnt=0,iStart=0,iEnd=0;

    printf("Enter number of elements you want to enter:\n");
    scanf("%d",&iLength);

    ptr=(int*)malloc(sizeof(int)*iLength);

    printf("Enter elements of array:\n");
    for(iCnt=0;iCnt<iLength;iCnt++)
    {
        scanf("%d",&ptr[iCnt]);
    }

    printf("Enter start and end of range : \n");
    scanf("%d %d",&iStart,&iEnd);

    CheckInRange(ptr,iLength,iStart,iEnd);

    free(ptr);
    return 0;
}
```

OUTPUT:



Q.5 Accept n number from user and return product of all odd numbers.

Ans.

```c
#include<stdio.h>
#include<stdlib.h>

int nOddMul(int Arr[],int iSize)
{
    int iCnt=0,iMul=1;

    for(iCnt=0;iCnt<iSize;iCnt++)
    {
        if(Arr[iCnt]%2!=0)
        {
            iMul*=Arr[iCnt];
        }
    }

    if(iMul==1)
    {
        iMul-=1;
    }

    return iMul;
}

int main()
{
    int *ptr=0;
    int iLength=0,iCnt=0;

    printf("Enter number of elements you want to enter:\n");
    scanf("%d",&iLength);

    ptr=(int *)malloc(sizeof(int)*iLength);

    printf("Enter Elements of array:\n");
    for(iCnt=0;iCnt<iLength;iCnt++)
    {
        scanf("%d",&ptr[iCnt]);
    }
```

```
    int iRet=nOddMul(ptr,iLength);

    printf("Multiplication of odd numbers in the array is: %d",iRet);

    return 0;
}
```

OUTPUT: