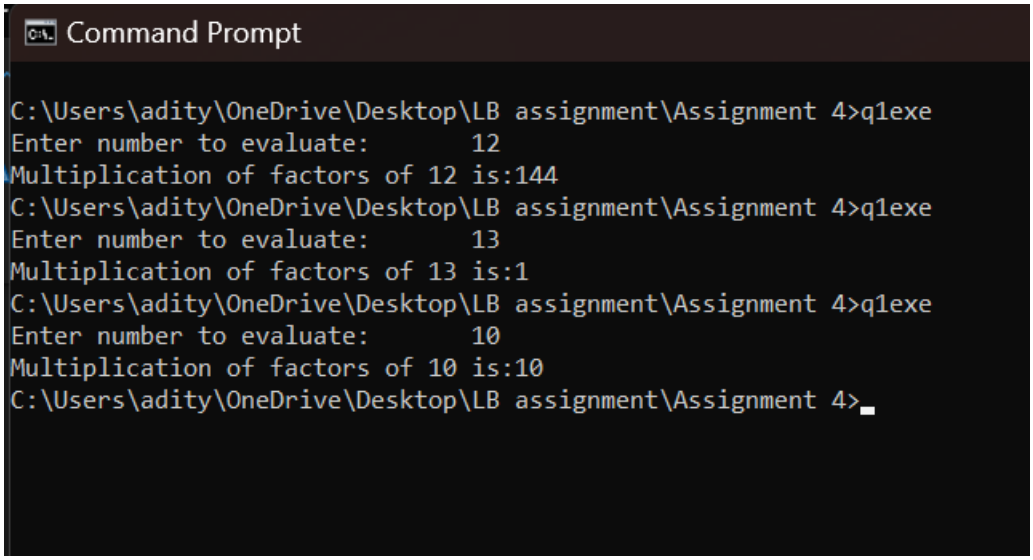
Assignment:4

Q.1 Write a program to print multiplication of factors of a given number.

Ans.

```c
#include<stdio.h>

int FactorsMultiplication(int iVal)
{
    int iCnt=0;
    int iMult=1;

    for(iCnt=1;iCnt<=(iVal/2);iCnt++)
    {
        if(iVal%iCnt==0)
        {
            iMult*=iCnt;
        }
    }
     return iMult;
}


int main()
{
    int iNo=0;

    printf("Enter number to evaluate:\t");
    scanf("%d",&iNo);

    int iRet=FactorsMultiplication(iNo);

    printf("Multiplication of factors of %d is:%d",iNo,iRet);

    return 0;
}
```

OUTPUT:



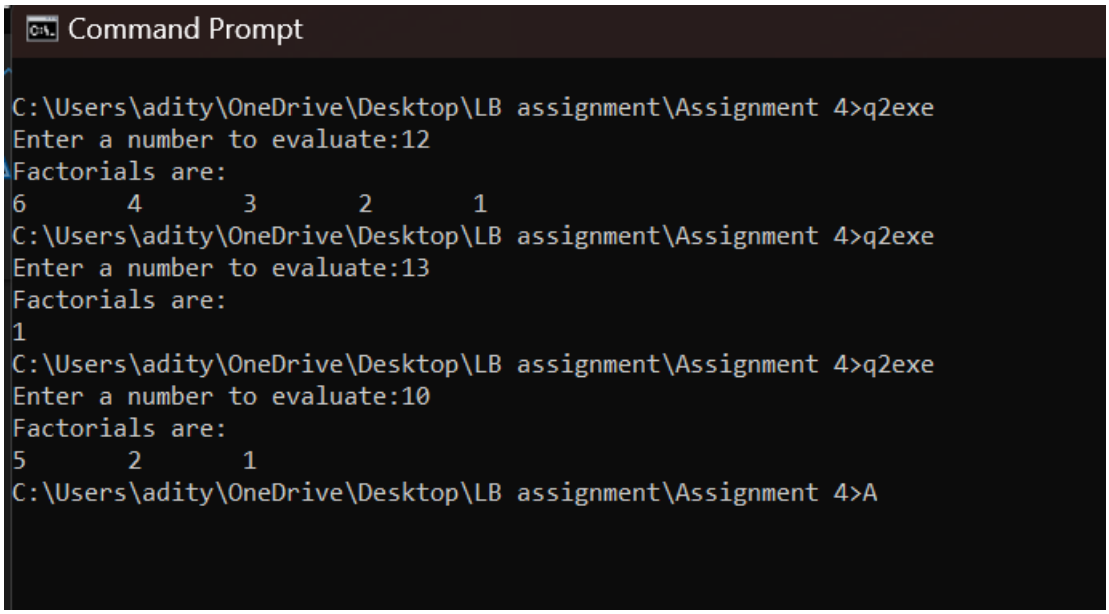
Q.2 Write a program to print factors of given number in given order.

Ans.

```c
#include<stdio.h>

void Factors(int iVal)
{
    int iCnt=0;

    printf("Factorials are:\n");

    for(iCnt=(iVal/2);iCnt>0;iCnt--)
    {
        if(iVal%iCnt==0){
        printf("%d\t",iCnt);
     }
    }
}

int main()
```

```
{
    int iNo=0;

    printf("Enter a number to evaluate:");
    scanf("%d",&iNo);

    Factors(iNo);

    return 0;
}
```

OUTPUT:



Q.3 Write a program to take a number and display its non-factors.

Ans.

```
#include<stdio.h>

void Display(int iVal)
{
    int iCnt=0;

    printf("Non-factors are:\n");
```

```
    for(iCnt=1;iCnt<=iVal;iCnt++)
    {
        if(iVal%iCnt!=0)
        {
            printf("%d\t",iCnt);
        }
    }
}

int main()
{
    int iNo=0;

    printf("Enter a number to display its non-factors:\t");
    scanf("%d",&iNo);

    Display(iNo);

    return 0;
}
```

OUTPUT:

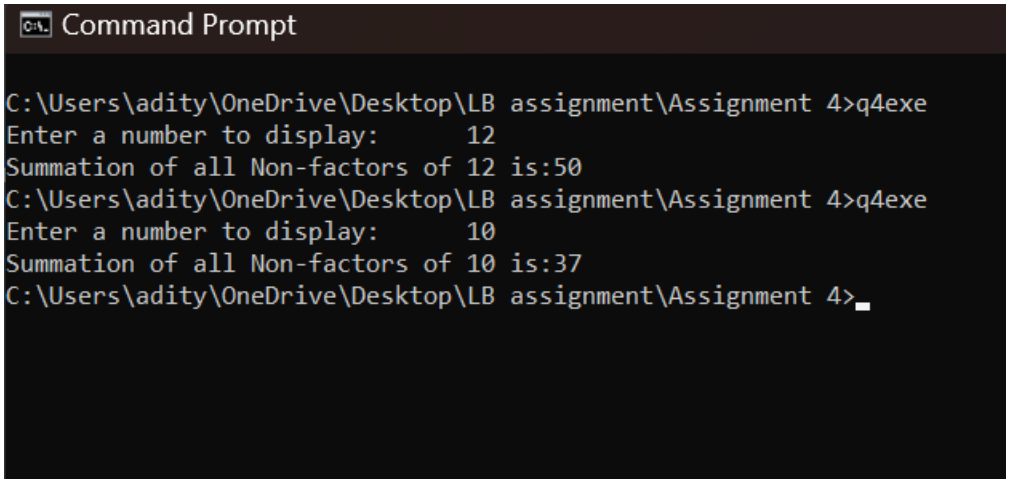
```
Command Prompt

C:\Users\adity\OneDrive\Desktop\LB assignment\Assignment 4>q3exe
Enter a number to display its non-factors:      12
Non-factors are:
5       7       8       9       10      11
C:\Users\adity\OneDrive\Desktop\LB assignment\Assignment 4>q3exe
Enter a number to display its non-factors:      13
Non-factors are:
2       3       4       5       6       7       8       9       10      11      12
C:\Users\adity\OneDrive\Desktop\LB assignment\Assignment 4>q3exe
Enter a number to display its non-factors:      10
Non-factors are:
3       4       6       7       8       9
C:\Users\adity\OneDrive\Desktop\LB assignment\Assignment 4>
```

Q.4 Write a program which accepts a number and returns summation of all its non-factors.

Ans.

```c
#include<stdio.h>

int Display(int iVal)
{
    int iCnt=0;
    int iSum=0;
    for(iCnt=1;iCnt<=iVal;iCnt++)
    {
        if(iVal%iCnt!=0)
        {
            iSum+=iCnt;
        }
    }

    return iSum;

}

int main()
{
    int iNo=0;

    printf("Enter a number to display:\t");
    scanf("%d",&iNo);

    int iRet=Display(iNo);

    printf("Summation of all Non-factors of %d is:%d",iNo,iRet);

    return 0;
}
```

OUTPUT:



Q.5 Write a program which accepts a number and displays difference between summation of Factors and Non-Factors.

Ans.

```c
#include<stdio.h>
int Display(int iVal)
{
    int iCnt=0;
    int iSumF=0;
    int iSumN=0;

    for(iCnt=1;iCnt<iVal;iCnt++)
    {
        if(iVal%iCnt==0)
        {
            iSumF+=iCnt;
        }

        else{
            iSumN+=iCnt;
        }

    }
```

```
    int iDiff=iSumF-iSumN;

    return iDiff;
}

int main()
{
    int iNo=0;
    printf("Enter a number to evaluate:");
    scanf("%d",&iNo);

    int iRet=Display(iNo);
    printf("Difference between the summation of factors and non-factors of %d
is:%d",iNo,iRet);

    return 0;
}
```

OUTPUT: