**May 5 Home questions**

#1. WAP to test whether a number num (num is entered through keyboard)

is a number in the Fibonacci sequence or not.

Code:

#include <stdio.h>

int main()

{

    int fib\_285[100],num\_285,i\_285,j\_285,flag=0;

    printf("Please provide your number\n");

    scanf("%d",&num\_285);

    fib\_285[0]=0;

    fib\_285[1]=1;

    fib\_285[2]=fib\_285[1]+fib\_285[0];

    for(i\_285=0;i\_285<50;i\_285++)

    {

        fib\_285[i\_285+2]=fib\_285[i\_285+1]+fib\_285[i\_285];

    }

    for(i\_285=0;i\_285<50;i\_285++)

    {

        if(num\_285==fib\_285[i\_285])

        {

            printf("Yes, %d is in the fibonacci series located on the %d term\n",num\_285,i\_285);

            flag++;

            break;

        }

    }

    if(flag==0)

    {

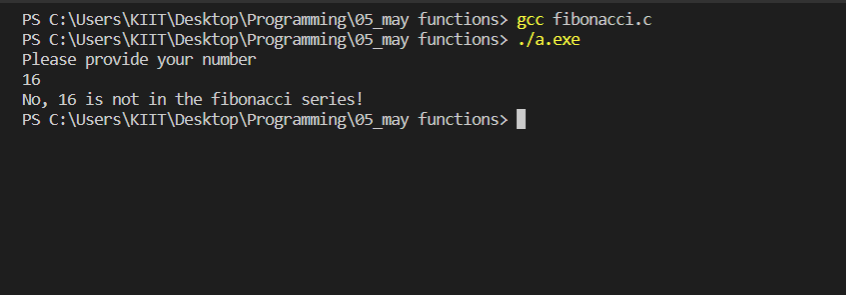
        printf("No, %d is not in the fibonacci series!\n",num\_285,i\_285);

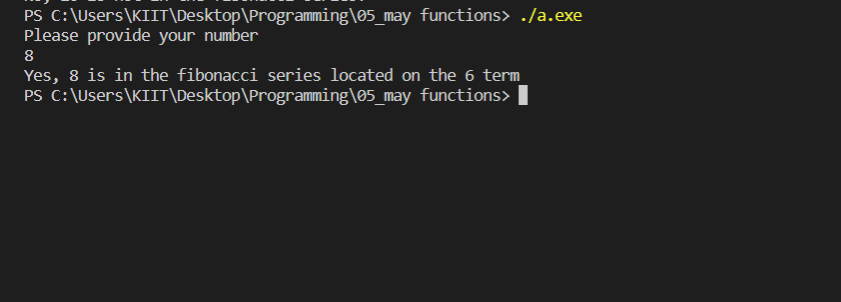
    }

    return 0;

}

Output:





#2. WAP to compute the power series (e to the power x).

Code:

#include <stdio.h>

#include <math.h>

float fact(float f\_285)

{

    float i\_285,n\_285;

    n\_285=f\_285;

    for(i\_285=1;i\_285<f\_285;i\_285++)

    {

        n\_285=n\_285\*(f\_285-i\_285);

    }

    return n\_285;

}

int main()

{

    float terms\_285,x\_285,i\_285,qoutient\_285,sum\_285=0;

    printf("How many terms do you want to be added\n");

    scanf("%f",&terms\_285);

    printf("What is our 'x'?\n");

    scanf("%f",&x\_285);

    for(i\_285=1;i\_285<=terms\_285;i\_285++)

    {

        qoutient\_285= pow(x\_285,i\_285)/fact(i\_285);

        sum\_285=sum\_285+qoutient\_285;

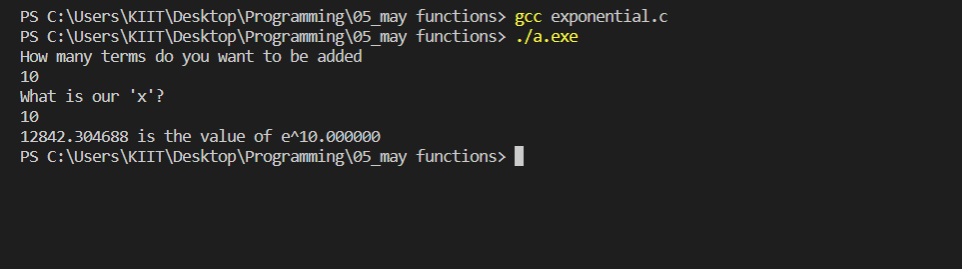
    }

    printf("%f is the value of e^%f\n",sum\_285+1,x\_285);

    return 0;

}

Output:



#3. WAP to find the LCM of two numbers a and b by using a suitable function (say LCM) for this.

Code:

#include <stdio.h>

void LCM(int a\_285,int b\_285)

{

    int i\_285,result\_285;

    for(i\_285=1;i\_285<5000;i\_285++)

    {

        if(i\_285%a\_285==0 && i\_285%b\_285==0)

        {

            printf("LCM of %d and %d is %d\n",a\_285,b\_285,i\_285);

            break;

        }

    }

}

int main()

{

    int a\_285,b\_285;

    printf("Please provide the two numbers\n");

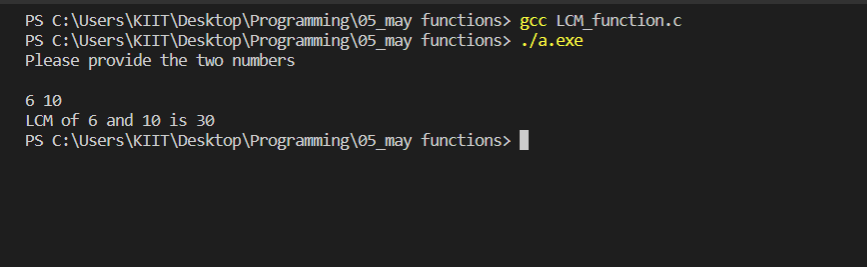
    scanf("%d%d",&a\_285,&b\_285);

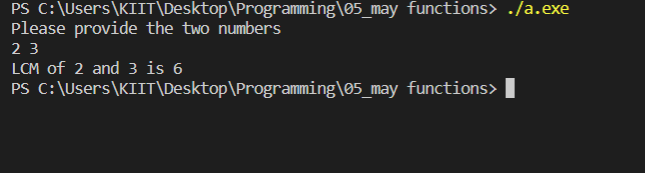
    LCM(a\_285,b\_285);

    return 0;

}

Output:





#4. A Fibonacci sequence is defined as follows: the first and second terms in

the sequence are 0 and 1. Subsequent terms are found by adding the preceding

two terms in the sequence (Fi = Fi−1 + Fi−2).

Code:

#include <stdio.h>

int main()

{

    int fib\_285[100],num\_285,i\_285,j\_285;

    printf("How many fibonacci terms do you want to be printed out?\n");

    scanf("%d",&num\_285);

    fib\_285[0]=0;

    fib\_285[1]=1;

    fib\_285[2]=fib\_285[1]+fib\_285[0];

    for(i\_285=0;i\_285<num\_285;i\_285++)

    {

        fib\_285[i\_285+2]=fib\_285[i\_285+1]+fib\_285[i\_285];

    }

    printf("Your fibonacci series is as follows\n");

    for(i\_285=0;i\_285<num\_285;i\_285++)

    {

        printf("%d ",fib\_285[i\_285]);

    }

    return 0;

}

Output:

