#include<iostream>

using namespace std;

class complex

{

    int real,imag;

    public:

        complex(int r=0,int i=0)

        {

            real=r;

            imag=i;

        }

        friend ostream & operator <<(ostream &out, complex const &obj);

        friend istream & operator >>(istream &in, complex &obj);

        complex operator +(complex const &obj)

        {

            complex res;

            res.real = real +obj.real;

            res.imag = imag +obj.imag;

            return res;

        }

        complex operator \*(complex const &obj)

        {

            complex res;

            res.real = (real\*obj.real-imag\*obj.imag);

            res.imag = (real\*obj.imag+imag\*obj.real);

            return res;

        }

};

ostream & operator <<(ostream &out, complex const &obj)

{

    out<<obj.real;

    out<<"+"<<obj.imag<<"i";

    return out;

}

istream & operator >>(istream &in, complex &obj)

{

    cout<<"Enter the real part :";

    in>>obj.real;

    cout<<"\t\t\t\tEnter the imaginary part :";

    in>>obj.imag;

    return in;

}

int main()

{

    complex c1,c2,c3,c4;

    cout<<"\nEnetr the first complex number :";

    cin>>c1;

    cout<<"\nEnetr the second complex number :";

    cin>>c2;

    cout<<"\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

    cout<<"\nThe first complex number is :"<<c1;

    cout<<"\nThe second complex number is :"<<c2;

    cout<<"\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

    c3=c1+c2;

    cout<<"\nThe addition is :"<<c3;

    cout<<"\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

    c4=c1\*c2;

    cout<<"\nThe multiplication is :"<<c4;

    cout<<"\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

    return 0;

}