```cpp
#include <iostream>
using namespace std;
class complex            //class name complex is declared
{
    float realp,imagp;
public:
    complex()               //default constructor
    {
        realp=0;
        imagp=0;
    }
    complex operator+(complex &);     //for addition of two complex nos
    complex operator*(complex &);     //for multiplication of two complex nos
    complex(float,float);           //parameterized constructor
    friend istream &operator>>(istream &,complex &);
    friend ostream &operator<<(ostream &,complex &);
};
complex::complex(float x,float y)     //parameterized constructor definition
{
    realp=x;
    imagp=y;

}
//function to accept values of real and imag parts of complex no
istream &operator>>(istream &din,complex &c)
{
    cout<<"Enter real part of complex number 2: ";
    din>>c.realp;
    cout<<"\nEnter imaginary part of complex number 2: ";
    din>>c.imagp;
    return din;
}
//functions to display complex nos
ostream &operator<<(ostream &dout , complex &c)
{
    dout<<c.realp<<" + "<<c.imagp<<"i";
    dout<<endl;
    return dout;
```

```cpp
}
//function to add two complex nos
complex complex::operator+(complex &c)
{
    complex temp;
    temp.realp=realp + c.realp;
    temp.imagp=imagp + c.imagp;
    return temp;
}
//function to multiply two complex nos
complex complex::operator*(complex &c)
{
    complex mul;
    mul.realp=(realp*c.realp) - ( imagp*c.imagp);
    mul.imagp=(imagp*c.realp) + (realp*c.imagp);
    return mul;
}
int main()
{
    complex c2,c3;
    complex c1(1.2,2.2);
    cout<<"Complex no 1 is:"<<c1;
    cout<<"Enter complex no 2:\n";
    cin>>c2;
    cout<<"Complex number 1 is :";
    cout<<c1;
    cout<<"Complex number 2 is :";
    cout<<c2;
    cout<<"Complex number 3 is :";
    cout<<c3;
    cout<<"\nAddition of two complex numbers is: ";
    c3=c1+c2;
    cout<<c3;
    cout<<"\nMultiplication of two complex number is: ";
    c3=c1*c2;
    cout<<c3;      //display value of c3
    return 0;
}
```

```
/*
OUTPUT:
Complex no 1 is:1.2 + 2.2i
Enter complex no 2:
Enter real part of complex number 2: 1

Enter imaginary part of complex number 2: 2
Complex number 1 is :1.2 + 2.2i
Complex number 2 is :1 + 2i
Complex number 3 is :0 + 0i

Addition of two complex numbers is: 2.2 + 4.2i

Multiplication of two complex number is: -3.2 + 4.6i
*/
```