INPUT

```
#include <iostream> using
namespace std; class complex
{
            int real; int img;
public:
             complex()
                        { real = 0; img = 0; cout<<"default constructor value :
                        "<<real<<"+"<<img<<"i"<<endl;
             }
complex operator+(complex b) { complex temp; temp.real=real+b.real;
            temp.img=img+b.img;
             cout<<"addition is : "<<temp.real<<"+"<<temp.img<<"i"<<endl;
    return temp;
}

complex operator*(complex b) { complex
            temp; temp.real=(real*b.real)-
            (img*b.img);
    temp.img=(real*b.img)+(img*b.real); cout<<"multiplication is :
    "<<temp.real<<"+"<<temp.img<<"i"<<endl; return
     temp;
}

friend ostream &operator<<(ostream &output, complex &m); friend
 istream &operator>>(istream &input, complex &m);
};

ostream &operator <<(ostream &output, complex &m) {
            output<<"\n"<<m.real<<"+"<<m.img<<"i"<<endl; return
            output;
}
istream &operator >>(istream &input, complex &m) { input>>m.real>>m.img; return input;
}
int main() {

             complex a;
            cout<<"\n enter 1st complex number : "<<endl;
             cin>>a;
             complex b;
            cout<<"\n enter 2nd complex number : "<<endl;
             cin>>b;
            cout<<"\n 1st complex number is "; cout<<a; cout<<"\n 2nd
            complex number is ";
             cout<<b;
             complex c=a+b;
              complex d=a*b;
             return 0;
}
```

OUTPUT

default constructor value : 0+0i

enter 1st complex number :

2 3 default constructor value : 0+0i

enter 2nd complex number :
4
5

1st complex number is
2+3i

2nd complex number is 4+5i
default constructor value : 0+0i
addition is : 6+8i default
constructor value : 0+0i
multiplication is : -7+22i