#include <iostream>

using namespace std;

class complex

{

float real;

float imag;

public:

complex()

{

real=0;

imag=0;

}

friend istream & operator >> (istream &is, complex &t);

friend ostream & operator << (ostream &os, complex &t);

complex operator + (complex& t)

{

complex ans;

ans.real = real + t.real;

ans.imag = imag + t.imag;

return ans;

}

complex operator \* (complex& t)

{

complex ans;

ans.real = (real \* t.real) - (imag \* t.imag);

ans.imag = (real \* t.imag) + (imag \* t.real);

return ans;

}

};

istream & operator >> (istream &is, complex &t)

{

cout<<"Enter the real part : "<<endl;

cin>>t.real;

cout<<"Enter the imaginary part : "<<endl;

cin>>t.imag;

return is;

}

ostream & operator << (ostream &os, complex &t)

{

cout<<t.real;

cout<<" + "<<t.imag<<"i"<<endl;

return os;

}

int main()

{

complex a1,a2,a3,a4;

 cout<<"Default constructor is invoked : "<<endl;

cout<<a1;

cout<<"Enter first complex number : "<<endl;

cin>>a1;

cout<<"Enter second complex number : "<<endl;

cin>>a2;

cout<<"First complex number is : "<<a1<<endl;

cout<<"Second complex number is : "<<a2<<endl;

a3 = a1 + a2;;

cout<<"Addition of two complex number is : "<<a3<<endl;

a4 = a1 \* a2;

cout<<"Multiplication of two complex number is : "<<a4<<endl;

return 0;

}