/*Experiment No: 01
ImplementaclassComplexwhichrepresentstheComplexNumberdatatype.
Implement
The following operations:

1. **Constructor (including a default constructor which creates the complex number 0+0i).**
2. **Overloaded operator + to add two complex numbers.**
3. **Overloaded operator * to multiply two complex numbers.**
4. **Overloaded << and >> to print and read Complex Numbers. */**

```
#include<iostream>
using namespace std;
class complex
{
float x;float y;
public:
complex() // Default constructor
{
x=0;y=0;
}

complex operator+(complex);//this is declaration of function to
overload + Operator
complex operator*(complex);//function to overload * Operator

friend istream &operator>>(istream &input,complex &t)
{
cout<<"Enter the real part";input>>t.x;
cout<<"Enterthe imaginary part";
input>>t.y;
}
friend ostream &operator<<(ostream &output,complex &t)
{
output<<t.x<<"+"<<t.y<<"i\n";
}

}; //class closing

complex complex::operator+(complex c)
{
complex temp;
temp.x=x+c.x;
temp.y=y+c.y;
return(temp);
}


complex complex::operator*(complex c)
{
complex temp2;
temp2.x=(x*c.x)-(y*c.y);
temp2.y=(y*c.x)+(x*c.y);
return(temp2);
}
```

```
int main()
{
complex c1,c2,c3,c4;//object of class
cout<<"Default constructor value=\n";
cout<<c1;

cout<<"\n Enter the 1st number\n";
cin>>c1;

cout<<"\n Enter the 2nd number\n";
//cin>>c1;
cin>>c2;

c3=c1+c2;
c4=c1*c2;

cout<<"\nThe firstnumber is";
cout<<c1;

cout<<"\nThe secondnumber is";
cout<<c2;

cout<<"\nThe addition is";
cout<<c3;

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

return 0;

}
```