Exercise 6: To construct a cpp program for operator overloading.

Source Code:

```
#include<iostream>
using namespace std;
class complex
{
float real,img;
public:
complex();
complex(float x,float y);
void read_complex();
complex operator+(complex);
complex operator-(complex);
void display();
};
complex::complex()
{
real=img=0;
}
complex::complex(float x,float y)
{
real=x; img=y;
}
void complex::display()
{
char sign;
if(img<0)
{
sign='-';
img=-img;
}
```

```
else
{
sign='+';
}
cout<<real<<sign<<"i"<<img<<endl;
}
complex complex::operator+(complex c)
{
complex r;
r.real=real+c.real;
r.img=img+c.img;
return r;
}
complex complex::operator-(complex c)
{
complex r;
r.real=real-c.real;
r.img=img-c.img;
return r;
}
void complex::read_complex()
{
cout<<"Enter real part of complex number;";
cin>>real;
cout<<"Enter Imaginary part of complex number:";
cin>>img;
}
int main()
{
complex a;
a.read_complex();
```

```
complex b;
b.read_complex();
complex c;
c=a+b;
cout<<"After Addition of two complex numbers";
c.display();
c=a-b;
cout<<"Difference of two complex numbers";
c.display();
}
```

OUTPUT:

```
Enter real part of complex number; 13
Enter Imaginary part of complex number: 33
Enter real part of complex number; 23
Enter Imaginary part of complex number: 43
After Addition of two complex numbers 36+i76
Difference of two complex numbers  -10-i10
```