心得：这次实验我学习了C++语言多态性的基本概念，掌握运算符重载函数的声明和定义方法。一般函数重载，运算符重载，虚函数等等，困扰我很久，但也是学习会了，只能以成员函数重载运算符， 运算符重载是通过创建运算符函数实现的，最后还看了转换构造函数，感受颇多。

代码：#include<iostream>

//#include<cstring>

#include<cmath>

using namespace std;

class complex {

private:

double real;

double image;

public:

complex(double real1=0 ,double image1=0):real(real1),image(image1){}

friend complex operator\*(complex& x, complex& y);

void show();

};

void complex::show()

{

cout << "The multiplication of the complexes is : " << endl;

cout << real;

if (image > 0)

cout << "+";

if(image!=0)

cout << image << "i" << endl;

}

complex operator\*(complex& x, complex& y)

{

complex temp;

temp.real = x.real \* y.real;

temp.image = x.image \* y.image;

return temp;

}

int main()

{

double x1, x2, y1, y2;

cout << "Please input the first complex: " << endl;

cin >> x1 >> y1;

cout << "Pease input the second complex: " << endl;

cin >> x2 >> y2;

complex a(x1 ,y1);

complex b(x2, y2);

complex c;

c = a \* b;

c.show();

return 0;

}

程序结果：

