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 - x.image \* y.image;

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

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;

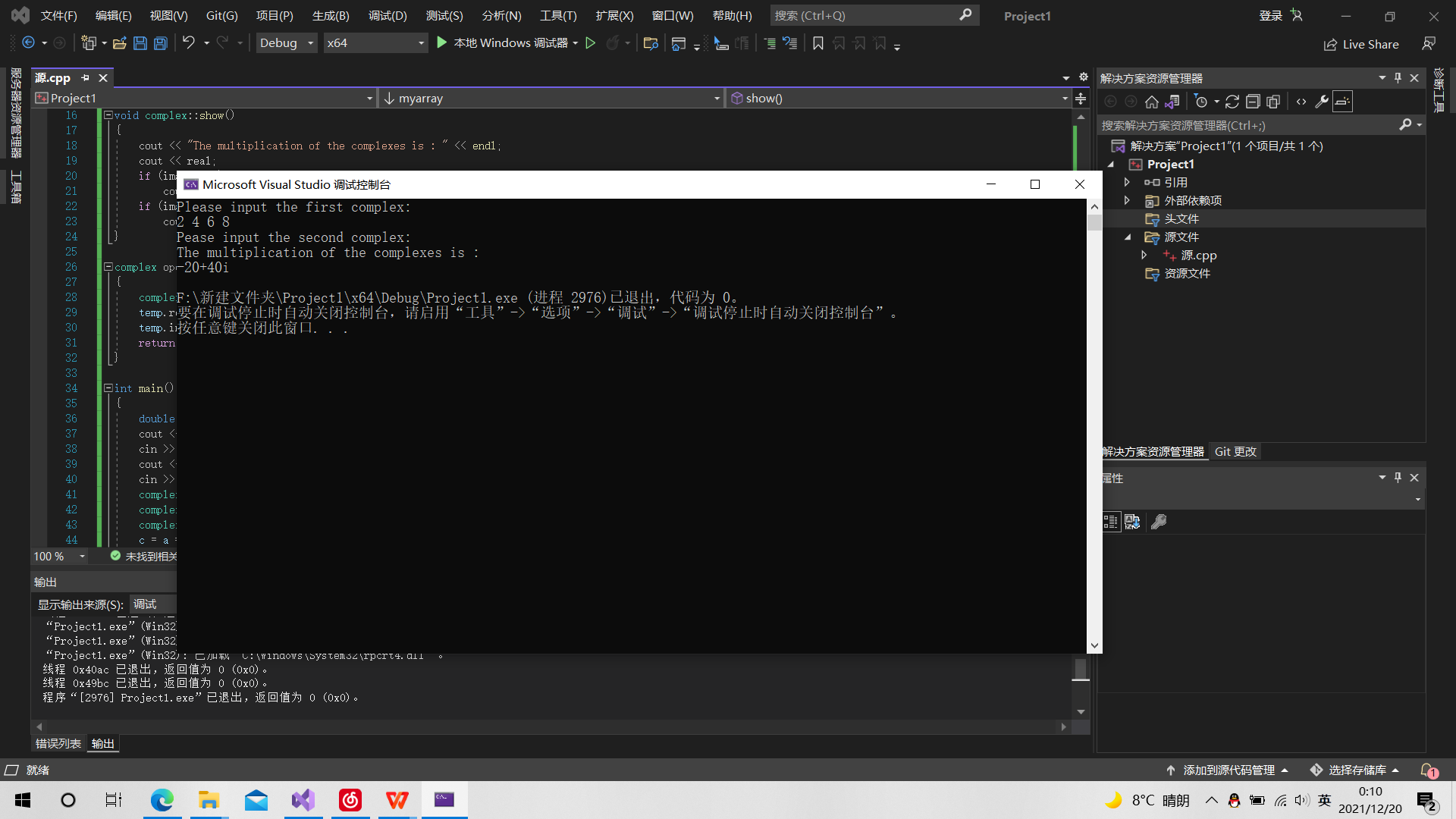
c = a \* b;

c.show();

return 0;

}

结果：



总结：掌握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，**第一种是直接在类内声明定义，第二种是在类中声明为友元函数，类外定义，返回值的是一个类的对象。**