1- Following is a declaration for a class to represent Complex numbers. A Complex number has two parts, the real part (let’s say a) and the imaginary part (say b), and is represented as a+bi where i has a value of sqrt (‐1). Write the implementation of the class.

**class complex**

**{**

**private: float real; // Real Part**

**float imag; // Imaginary Part public:**

**complex(float,float); //2-arg constructor with default parameters**

**complex add(complex);**

**complex subtract(complex);**

**complex multiply(complex);**

**complex divide(complex);**

**complex getconjugate();**

**void setdata(float,float); //assigns the values passed as arguments to the object on which setdata is called**

**void getdata(); //takes real and imag as input from user**

**float getreal(); //returns data member real**

**float getimaginary(); //returns data member imag**

**void display(); //displays the complex number in the form a+bi**

**};**

Addition of two complex numbers: (a + bi) + (c + di) = (a + c) + (b + d)i

Multiplication of two complex numbers: (a + bi)(c + di) = (ac − bd) + (bc + ad)i

Subtraction of two complex numbers: (a + bi) − (c + di) = (a − c) + (b − d)i

Division of two complex numbers:

Conjugate of a complex number: The conjugate of a + bi is a –bi

Program#1…