

**/*complex no add,mul,subtract,div by constructor
overloading*/**

```
class Complex {  
    float real, img;  
    public Complex() {  
        real = 0;  
        img = 0;  
    }  
  
    public Complex(float a, float b) {  
        real = a;  
        img = b;  
    }  
  
    public void Display(Complex C1, Complex C2) {  
        System.out.println("First Complex Numbers=(" + C1.real + ")+(" + C1.img + "i"); //printing first  
complex number  
        System.out.println("Second Complex Numbers = (" +C2.real+") + (" +C2.img+"i");  
        //printing second complex number  
    }  
  
    public void AddNumbers(Complex C1, Complex C2) { //addition of two complex number  
        float real, img;  
        real = (C1.real + C2.real); //real part of complex number  
        img = (C1.img + C2.img); //img part of complex number  
        System.out.println("Addition of Complex Numbers = (" +real+") + (" +img+"i");  
        //printing addition of two complex number  
    }  
  
    public void SubNumbers(Complex C1, Complex C2) { //substraction of two complex number  
        float real, img;
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        real = (C1.real - C2.real); //real part of complex number

        img = (C1.img - C2.img); //img part of complex number

        System.out.println("Substraction of Complex Numbers = (" + real + ") + (" + img + ")i"); //priting
        substraction of two complex number
    }

    public void MultiNumbers(Complex C1, Complex C2) { //multiplication of two complex number

        float real, img;

        real = (C1.real * C2.real - C1.img * C2.img); //real part of complex number

        img = (C1.real * C2.img + C1.img * C2.real); //img part of complex number

        System.out.println("Multiplication of Complex Numbers = (" + real + ") + (" + img + ")i"); //printing
        multiplication of two complex number
    }

    public void DivNumbers(Complex C1, Complex C2) { //division of two complex number

        float real, img;

        real = (C1.real * C2.real + C1.img * C2.img) / (C2.real * C2.real + C2.img * C2.img); //real part of
        complex number

        img = (C1.img * C2.real - C1.real * C2.img) / (C2.real * C2.real + C2.img * C2.img); //img part of
        complex number

        System.out.println("Division of Complex Numbers = (" + real + ") + (" + img + ")i");

        //printing division of two complex number
    }
}

public class Complex_No {

    public static void main(String[] args) {

        float num1, num2;

        Complex cal = new Complex();

        //Enter the Complex number in a+bi format

        //taking input for first Number

        //Enter real part of First Number: a

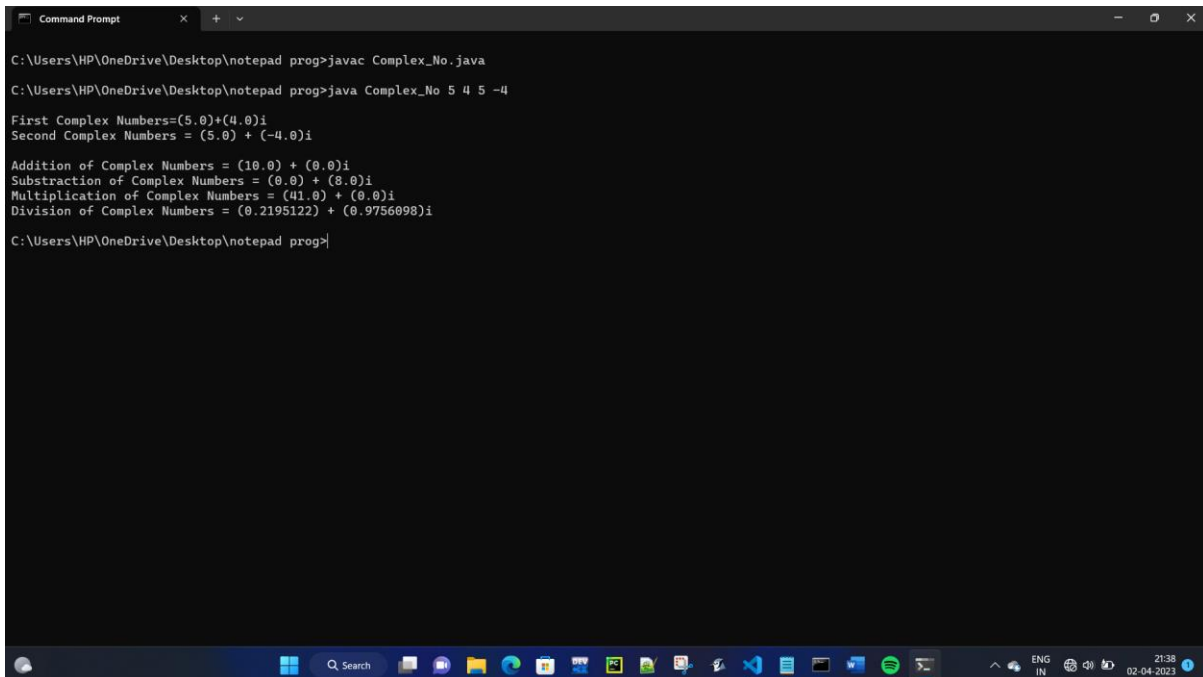
        num1 = Integer.parseInt(args[0]);

```

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//Enter img part of First Number: b
num2 = Integer.parseInt(args[1]);
Complex Com1 = new Complex(num1, num2);
//taking input for Second Number
//Enter real part of Second Number: a
num1 = Integer.parseInt(args[2]);
//Enter img part of Second Number: b
num2 = Integer.parseInt(args[3]);
Complex Com2 = new Complex(num1, num2);
System.out.print("\n");
cal.Display(Com1, Com2); //calling display function
System.out.print("\n");
cal.AddNumbers(Com1, Com2); //calling addition function
cal.SubNumbers(Com1, Com2); //calling subtraction function
cal.MultiNumbers(Com1, Com2); //calling multiplication function
cal.DivNumbers(Com1, Com2); //calling division function
}
}

```



```

Command Prompt
C:\Users\HP\OneDrive\Desktop\notepad prog>javac Complex_No.java
C:\Users\HP\OneDrive\Desktop\notepad prog>java Complex_No 5 4 5 -4
First Complex Numbers=(5.0)+(4.0)i
Second Complex Numbers = (5.0) + (-4.0)i
Addition of Complex Numbers = (10.0) + (0.0)i
Subtraction of Complex Numbers = (0.0) + (8.0)i
Multiplication of Complex Numbers = (41.0) + (0.0)i
Division of Complex Numbers = (0.2195122) + (0.9756090)i
C:\Users\HP\OneDrive\Desktop\notepad prog>

```