**PRACTICAL – 3(6)**

**Aim: Print the sum, difference and product of two complex numbers by creating a class named ‘Complex’ with separate methods for each operation whose real and imaginary parts are entered by user.**

**SOURCE CODE:**

public class Practical\_3\_6 {

    public static *void* main(String[] *args*) {

        complex c1 = new complex(5, 3);

        c1.printcomplexnumber();

        complex c2 = new complex(4, 1);

        c2.printcomplexnumber();

        complex c3 = new complex();

        c3 = c3.addcomplex(c1, c2);

        System.out.print("\nsum is: ");

        c3.printcomplexnumber();

        c3 = c3.subcomplex(c1, c2);

        System.out.print("substraction is: ");

        c3.printcomplexnumber();

        c3 = c3.productcomplex(c1, c2);

        System.out.print("multiplication is: ");

        c3.printcomplexnumber();

        c3 = c3.dividecomplex(c1, c2);

        System.out.print("division is: ");

        c3.printcomplexnumber();

        System.out.println("\n20DCE019-Yatharth Chauhan");

    }

}

class complex {

*int* real, imagenery;

    complex() {

    }

    complex(*int* *tempReal*, *int* *imagnery*) {

        real = *tempReal*;

        imagenery = *imagnery*;

    }

*void* printcomplexnumber() {

        System.out.println(+real + " + " + imagenery + "i");

    }

    complex addcomplex(complex *c1*, complex *c2*) {

        complex temp = new complex();

        temp.real = *c1*.real + *c2*.real;

        temp.imagenery = *c1*.imagenery + *c2*.imagenery;

        return temp;

    }

    complex subcomplex(complex *c1*, complex *c2*) {

        complex temp = new complex();

        temp.real = *c1*.real - *c2*.real;

        temp.imagenery = *c1*.imagenery - *c2*.imagenery;

        return temp;

    }

    complex productcomplex(complex *c1*, complex *c2*) {

        complex temp = new complex();

        temp.real = *c1*.real \* *c2*.real;

        temp.imagenery = *c1*.imagenery \* *c2*.imagenery;

        return temp;

    }

    complex dividecomplex(complex *c1*, complex *c2*) {

        complex temp = new complex();

        temp.real = *c1*.real / *c2*.real;

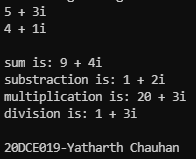
        temp.imagenery = *c1*.imagenery / *c2*.imagenery;

        return temp;

    }

}

**OUTPUT:**

****

**CONCLUSION:** In this practical we have print the sum, difference and product of two complex numbers.