OBJECT ORIENTED PROGRAMING LAB

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Roll No : 46

Batch : B

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Experiment No.: 3

Aim

Add complex numbers.

Source Code

```
import java.util.*;

class ComplexNumbers{

	int real, imaginary;

	ComplexNumbers(){  }

	ComplexNumbers(int real, int imaginary){
		this.real= real;
		this.imaginary= imaginary;
	}

	void complexAdd(ComplexNumbers compNum){
		int real_sum, imaginary_sum;
		real_sum= this.real+compNum.real;
		imaginary_sum= this.imaginary+compNum.imaginary;
		System.out.println("The sum of the complex numbers is : "+real_sum+"
+ "+imaginary_sum+"i");
	}

	void display(){
		System.out.println("The entered complex number is : "+real+" +
"+imaginary+"i");
		System.out.println("\n");
	}

	public static void main(String[] args){

		int real_num, imaginary_num;
```

```
                Scanner sc= new Scanner(System.in);

                System.out.print("Enter  the real value  of  the 1st complex number   : ");
                real_num= sc.nextInt();
                System.out.print("Enter the imaginary value of the 1st complex number :
");
                imaginary_num= sc.nextInt();
                ComplexNumbers com1= new ComplexNumbers(real_num,
imaginary_num);
                com1.display();

                System.out.print("Enter  the real value  of  the 2nd complex number   :
");
                real_num= sc.nextInt();
                System.out.print("Enter the imaginary value of the 2nd complex number
: ");
                imaginary_num= sc.nextInt();
                ComplexNumbers com2= new ComplexNumbers(real_num,
imaginary_num);
                com2.display();

                com1.complexAdd(com2);
        }
}
```

Output Screenshot

```
D:\Swetha\Java>javac ComplexNumbers.java

D:\Swetha\Java>java ComplexNumbers
Enter  the real value  of  the 1st complex number   : 3
Enter the imaginary value of the 1st complex number : 2
The entered complex number is : 3 + 2i


Enter  the real value  of  the 2nd complex number   : 8
Enter the imaginary value of the 2nd complex number : 5
The entered complex number is : 8 + 5i


The sum of the complex numbers is : 11 + 7i
```