

## National University of Computer and Emerging Sciences, Lahore Campus



Course:	OOP	Course Code:	CS217
Program:	BS(Computer Science)	Semester:	Fall2022
Due Date:	03-04-2022 , 11:00 PM	Total Marks:	20
Date:	31-03-2022	Page(s):	
Section:	2J, 2K & 2L	Roll No.	
Type:	Assignment-2		

### Instruction/Notes:

- **Zero Tolerance for Plagiarism.** You will get straight away zero marks in all assignments.
- Individual Assignment
- Read the deadline carefully. No Extension this time.
- **Do not change class definition**
- Submit only one RUNNING file **YourRollNumber.cpp** that contains class, its implementation and the driver Program.
- **Do not** submit .rar or .zip files.

Implement following **ComplexNumber** class and write driver program to produce given sample output:

```
class ComplexNumber
```

```
{
```

```
private:
```

```
    int real;
```

```
    int imaginary;
```

```
public:
```

```
    ComplexNumber(int, int); //with default arguments
```

```
    ~ComplexNumber(); //Does Nothing.
```

```
    void Input();
```

```
    void Output();
```

```
    bool IsEqual(ComplexNumber);
```

```
    ComplexNumber Conjugate();
```

```
    ComplexNumber Add(ComplexNumber);
```

```
    ComplexNumber Subtract(ComplexNumber);
```

```
    ComplexNumber Multiplication(ComplexNumber);
```

```
    float Magnitude();
```

```
};
```

### Sample Output:

```
C:\Windows\system32\cmd.exe
Enter c1:
Enter Real:      2
Enter Imaginary:      3

Enter c2:
Enter Real:      4
Enter Imaginary:      5

c1 = 2+3i
c2 = 4+5i
c1 is NOT Equal to c2.
Conjugate of c1:      2-3i
Conjugate of c2:      4-5i
c1 + c2 :      6+8i
c1 - c2 :      -2-2i
c1 x c2 :      Do Yourself
Magnitude of c1 = Display Magnitude of c1 here
Magnitude of c2 = Display Magnitude of c2 here
Press any key to continue . . . _
```

### Help:

[https://en.wikipedia.org/wiki/Complex\\_number](https://en.wikipedia.org/wiki/Complex_number)