

Homework VII – Complex Numbers

PROG 1103 – GUI Programming

Summary

For this assignment, we will use operator overloading to create a complete number calculator.

Specifications

1. A complex number is a number in the form $(a + bi)$ like $(4 + 9i)$ or $(-4 - 9i)$. In this case i is the imaginary number which is the square root of -1 .
2. Create a `ComplexNumber` class which models a complex number and overloads the following operators: unary (+ and -), binary (+, *, /, -), relational (== and !=).
3. Make sure you override `Equals`, `GetHashCode`, and `ToString`.
4. Model your form and class after our `Fraction` example. Allow the user to perform all operations on complex numbers.
5. DO NOT assume the user will enter valid data.
6. Here is a very simple illustration of performing the arithmetic operations on complex numbers (it is not difficult).
7. <https://www.mathsisfun.com/numbers/complex-numbers.html>

Documentation

A text document (.docx, .rtf, .pdf) which contains the following:

1. Your name and assignment.
2. Do not forget the XML style comments.
3. Screenshots showing your code running. Make sure you show test cases for the different operations.

What to Submit

You need to submit your entire solution folder zipped and your document as (docx, doc, rtf, or pdf).