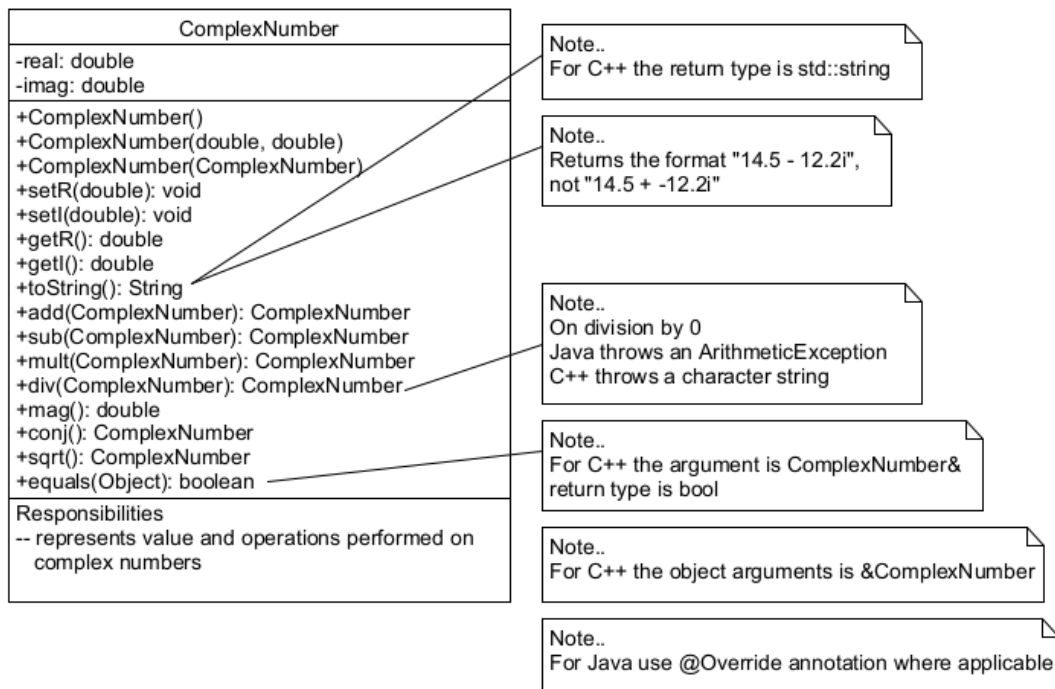


Complex Numbers

A *complex number* is a number expressed as two real numbers, the real part and the imaginary part. Their importance in computation is in the fields of math, physics, and engineering, just to name a few. A further description and formulas for arithmetic operations can be found here: [\[Wikipedia\]](#). Note that division by 0 must throw an **ArithmeticException** in Java and a literal character string (**char***) in C++.

The Problem

Write two programs, one in Java and one in C++ to represent a complex number in a **class** called **ComplexNumber**. The classes should implement the following UML diagram.



Demonstrate your code with the test files provided.

Deliverables

1. Source code attached to assignment in Canvas
 - a. One .java file
 - b. One .cpp file

- c. One .h file
- 2. A text that contains
 - a. A reflective essay on your successes, difficulties, and how you tested your code to ensure correctness
 - b. Screen shot of the running programs (included in the document)