

Interfaces

Problem 1

Design and implement a classes hierarchy, which works with integer, real and complex numbers. The real and imaginary parts of a complex number are integers. Write an interface named **Number** that supplies at least two operations: add and subtract of two numbers. The result of each of these operations is a new number. The classes IntegerNumber, RealNumber and ComplexNumber will implement the interface Number. Assume that we cannot add an integer or real number with a complex number. Write another class to test the hierarchy created.

Problem 2

Modify the previous program to sort in an ascending order the integer numbers and in a descending order the real numbers created.