

Exercises

Ex1: Develop is a class of books. Each book has the following attributes:

- an author;
- a title;
- a format;
- a price;
- a year of publication; and
- a publisher.

Ex2: A class for rational numbers, the number should always be represented as a *fully reduced fraction* of the form

$$\frac{\textit{numerator}}{\textit{denominator}}$$

where denominator>0

- Write a class *Rational*, which represents a rational number. The constructor should have the *numerator* and the *denominator* as arguments. Be sure to check for valid input. In addition, the class has two functions *numerator()* and *denominator()* that return the values of the numerator and denominator. The class should have three constructors:
 - a default constructor that initializes the fraction with 1,
 - a constructor that initializes the fraction with a given numerator and denominator and
 - a constructor that initializes the fraction with a given whole number.
- Writing a function `int gcd(int,int)` (greatest common divisor), you will need it to reduce fractions.