The RomanNumeral Class

Write a **Java** class to represent Roman numerals.

**Roman Numerals**

The subtractive Roman numeral notation commonly in use today (such as IV, meaning "4") was used only rarely during the time of the Roman Republic and Empire. For ease of calculation, the Romans most frequently used a purely additive notation in which a number was simply the sum of its digits (4 equals IIII, in this notation). Each number starts with the digit of highest value and ends with the one of smallest value. This is the notation you will use in this problem.

The values of the Roman digits are as follows:

**I 1**

**V 5**

**X 10**

**L 50**

**C 100**

**D 500**

**M 1000**

Thus the number MDCCCCLXXXXVI represents 1996. The class may also check to ensure that the numbers are in purely additive form - digits are followed only by digits of the same or lower value.

The **RomanNumeral** class should have the following methods:

* 3 constructors:
* a default constructor which sets the Roman numeral to "" and the decimal equivalent to zero
* an overloaded constructor with a String parameter. It should set the Roman numeral to the parameter value and convert it to its decimal equivalent.
* an overloaded constructor with an integer parameter. It should set the decimal value to the parameter value and converts it to its Roman numeral equivalent.
* accessors and mutators for the instance variables
* a private method to convert the Roman numeral value to an integer
* a private method to convert the integer value to a Roman numeral