Test-Driven Development Lab

In this lab, we'll be running a code kata called the roman numeral kata.

The Romans were pretty clever. They conquered most of Europe, invented concrete and straight roads and indoor plumbing. But they never quite got their arms around "zero". Their system of numbers is still used whenever we want a self-important way of numbering massive football events or copyrighting motion pictures.

The Romans wrote numbers using letters - I, V, X, L, C, D, M. (Notice that these letters have lots of straight lines so they're easy to hack into stone tablets).

Roman	Decimal
I	1
V	5
X	10
L	50
C	100
D	500
M	1000

Roman numerals are written by expressing each digit separately starting with the leftmost digit and skipping any digit with a value of zero.

For example:
6 would be VI because 5=V, I=1
34 would be XXXIV because 30=XXX, 4=IV
49 would be XLIX because 40=XL, 9=IX (Note that it is not IL!)
478 would be CDLXXVIII because 400=CD, 70=LXX, 8=VIII
1990 would be MCMXC because 1000=M, 900=CM, 90=XC
2016 would be MMXVI because 2000=MM, 10=X, 6=VI

The Kata says you should write a function to convert from decimal numbers to roman numerals and/or a function to convert from roman numerals to decimals.

There is no need to be able to convert numbers larger than about 3000. (The Romans themselves didn't tend to go any higher)

Steps

1. Partner 2 picks one -- and only one -- business requirement.

2. Partner 2 writes the test for that business requirement. This test will fail because the logic has not yet been implemented.

3. Partner 1 writes the most naïve implementation that causes the test to pass.

4. Partner 1 refactors any other code he/she thinks can be improved, keeping all past tests green.

5. Switch roles and do it all over again. Namely, Partner 1 writes a failing test and Partner 2 makes it pass and refactors.

Keep going until all teams have had the chance to do at least three or four rounds