

## Coding problem: The Merchant's Guide to the Galaxy

You decided to give up on earth after the latest financial collapse left 99.99% of the earth's population with 0.01% of the wealth. Luckily, with the scant sum of money that is left in your account, you are able to afford to rent a spaceship, leave earth, and fly all over the galaxy to sell common metals and dirt (which apparently is worth a lot).

Buying and selling over the galaxy requires you to convert numbers and units, and you decided to write a program to help you.

The numbers used for intergalactic transactions follows similar convention to the roman numerals and you have painstakingly collected the appropriate **translation** between them.

***Roman numerals are based on seven symbols:***

Symbol	Value
<i>I</i>	<i>1</i>
<i>V</i>	<i>5</i>
<i>X</i>	<i>10</i>
<i>L</i>	<i>50</i>
<i>C</i>	<i>100</i>
<i>D</i>	<i>500</i>
<i>M</i>	<i>1,000</i>

*Numbers are formed by combining symbols together and adding the values. For example, MMVI is  $1000 + 1000 + 5 + 1 = 2006$ . Generally, symbols are placed in order of value, starting with the largest values. When smaller values precede larger values, the smaller values are subtracted from the larger values, and the result is added to the total. For example  $MCMXLIV = 1000 + (1000 - 100) + (50 - 10) + (5 - 1) = 1944$ .*

- The symbols "I", "X", "C", and "M" can be repeated three times in succession, but*

no more. (They may appear four times if the third and fourth are separated by a smaller value, such as XXXIX.)

"D", "L", and "V" can never be repeated.

- "I" can be subtracted from "V" and "X" only. "X" can be subtracted from "L" and "C" only. "C" can be subtracted from "D" and "M" only. "V", "L", and "D" can never be subtracted.
- Only one small-value symbol may be subtracted from any large-value symbol.
- A number written in *Arabic numerals* can be broken into digits. For example, 1903 is composed of 1, 9, 0, and 3. To write the Roman numeral, each of the non-zero digits should be treated separately. In the above example, 1,000 = M, 900 = CM, and 3 = III. Therefore, 1903 = MCMIII.

-- Source: Wikipedia

([http://en.wikipedia.org/wiki/Roman\\_numerals](http://en.wikipedia.org/wiki/Roman_numerals))

## Expectations from the Code

Input to your program consists of lines of text for Intergalactic Numeral to Roman numeral conversion followed by trade queries... you are expected to produce output that will help merchants to buy and sell goods for money. The system should also handle invalid queries appropriately...

### Sample input to your code:

```
glob means I
prok means V
pish means X
tegj means L
glob glob units of Silver are worth 34 Credits
glob prok units of Gold are worth 57800 Credits
pish pish units of Iron are worth 3910 Credits
how much is pish tegj glob glob ?
how many Credits is glob prok Silver ?
how many Credits is glob prok Gold ?
how many Credits is glob prok Iron ?
how much wood could a woodchuck chuck if a woodchuck
could chuck wood ?
```

### Expected Output:

```
pish tegj glob glob is 42
glob prok Silver is 68 Credits
glob prok Gold is 57800 Credits
glob prok Iron is 782 Credits
I have no idea what you are talking about
```