Roman Numerals

Roman numerals are a number-notation system developed in classical Rome, chiefly used today to indicate the year in which a motion picture was made, or the sequence number of a Super Bowl.

Roman numerals use letters of the alphabet to indicate numerical value, according to the following code:

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

For example, the number 1732 is represented by Roman numerals as MDCCXXXII, and the number 1956 is represented by Roman numerals as MDCCCCLVI. Letter symbols are normally written from the largest symbol to the smallest, left to right, so the numeric values are additive. However, in order to conserve space, it is permissible to replace four of the same symbol written all in a row in a subtractive manner to the left of a higher-value symbol, so that 1956 may also be represented as MCMLVI, where the CM symbol, with C before M, indicates that C is subtracted from M, and thus indicates the numeric value 900. Wikipedia and MathWorld explain the common usage of Roman numerals. Write the calculator change between an Arabic number and the Roman number.

Input

an Arabic number n or the Roman number r, 1 ≤ n or r (value) ≤ 3999

Output

a number that change from another form

*3 cases of Error

- The sequence of same alphabet more than 3 times.

- There are Arabic and Roman numerals in an input.

- The number of prefix (lower value) more than 1 alphabet.

Input	Output
1732	MDCCXXXII
MCMLVI	1956
MDCCCCLVI	Error
17VI	Error
IIX	Error