Roman Numerals

memory limit: `8 MB`
time limit: `1 s`

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:

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

For example, the number 1732 is represented by Roman numerals as MDCCXXXII. Letter symbols are normally written from the largest symbol to the smallest, left to right, so the numeric values are additive. However, in a few specific cases, to avoid four characters being repeated in succession (such as IIII or XXXX), subtractive notation is used: as in this table:

Number	4	9	40	90	400	900
Notation	IV	IX	XL	XC	CD	CM

So, 1996 is represented as MCMXCVI, where the CM symbol, with C before M, indicates that C is subtracted from M, and thus indicates the numeric value 900, and XC indicates the value 90. Note that we do not use XM to indicate 990. Wikipedia and MathWorld explain the common usage of Roman numerals. Your task is to write a program that read an Arabic-numeral number and display it using Roman numerals.

Input

Input has only one integer n $(1 \leq n < 4000)$

Output

Your program has to display a single line of a string that represent n in Roman numeric system.

Example

Input	Output
Input	**Output**
1996	MCMXCVI