

LEETCODE SOLUTIONS - YOGESH MUNEEES

12. Integer to Roman

Medium



6.1K

5.2K



Companies

Roman numerals are represented by seven different symbols: **I**, **V**, **X**, **L**, **C**, **D** and **M**.

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

For example, **2** is written as **II** in Roman numeral, just two one's added together. **12** is written as **XII**, which is simply **X + II**. The number **27** is written as **XXVII**, which is **XX + V + II**.

Roman numerals are usually written largest to smallest from left to right. However, the numeral for four is not **IIII**. Instead, the number four is written as **IV**. Because the one is before the five we subtract it making four. The same principle applies to the number nine, which is written as **IX**. There are six instances where subtraction is used:

- I** can be placed before **V** (5) and **X** (10) to make 4 and 9.
- X** can be placed before **L** (50) and **C** (100) to make 40 and 90.
- C** can be placed before **D** (500) and **M** (1000) to make 400 and 900.

Solution:

```
class Solution:
    def intToRoman(self, num: int) -> str:
        ones = ["", "I", "II", "III", "IV", "V", "VI", "VII", "VIII", "IX"]
        tens = ["", "X", "XX", "XXX", "XL", "L", "LX", "LXX", "LXXX", "XC"]
        hundreds = ["", "C", "CC", "CCC", "CD", "D", "DC", "DCC", "DCCC", "CM"]
        thousands = ["", "M", "MM", "MMM"]
        return thousands[num//1000] + hundreds[(num//100)%10] + tens[(num//10)%10] + ones[num%10]
```