13. Roman to Integer

Easy 👍 1189 👎 94 ♡ Add to List ⬆ Share

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.

```python
class Solution:
    # @param {string} s
    # @return {integer}
    def romanToInt(self, s):
        roman = {'M': 1000,'D': 500 ,'C': 100,'L': 50,'X': 10,'V': 5,'I': 1}
        z = 0
        for i in range(0, len(s) - 1):
            if roman[s[i]] < roman[s[i+1]]:
                z -= roman[s[i]]
            else:
                z += roman[s[i]]

        return z + roman[s[-1]]
```

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Testcase | Run Code Result | Debugger 🔒

Accepted Runtime: 64 ms

Your input   "III"

Output   3   Diff

Expected   3

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