Question : Given a roman numeral convert it to integer

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

* 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.

Clarifying Questions: (5)

Is there a limit to the max number?

What should I return if the test case gives a number that has a character that is not capital case? Or if the character is not an i, v, x, l, c, d, and m?

Explain solution: (5)

What I did was I checked if the first value was equal to anything. If it was, I added the amount to the answer. Then, I saw the second value. If needed be, I added or subtracted anything.

Time and Space Complexity: (2)

Space Complexity (x)

Time Complexity (x)

Code (5)

def value(r):

    if r == 'I':

        return 1

    if r == 'V':

        return 5

    if r == 'X':

        return 10

    if r == 'L':

        return 50

    if r == 'C':

        return 100

    if r == 'D':

        return 500

    if r == 'M':

        return 1000

    else:

        return False

def romanToDecimal(number):

    answer = 0

    i=0

    while i<len(number):

        one = number[i]

        if i+1 != len(number):

            two = number[i+1]

        else:

            answer+=int(value(one))

            i+=1

            continue

        condition2 = value(two) == 5 or value(two) == 10

        if value(one) == 1 and condition2 == True:

            to\_add = value(two) - value(one)

            answer+=int(to\_add)

            break

        condition2 = value(two) == 50 or value(two) == 100

        if value(one) == 10 and condition2 == True:

            to\_add = value(two) - value(one)

            answer+=int(to\_add)

            i+=2

            continue

        condition2 = value(two) == 500 or value(two) == 1000

        if value(one) == 100 and condition2 == True:

            to\_add = value(two) - value(one)

            answer+=int(to\_add)

            i+=2

            continue

        else:

            answer = 'is not a Numeral. Sorry.'

        to\_add = value(one)

        answer+=int(to\_add)

        i+=1

    return answer

Test cases (5)

Test\_case\_userinput=romanToDecimal(input("Enter a roman numeral here:"))

print(f"Integer form of Roman Numeral is {Test\_case\_userinput}.")

Test\_case\_digits\_increase=romanToDecimal(input('MCDLXVII'))

print(f"Integer form of Roman Numeral is {Test\_case\_digits\_increase}.")

Test\_case\_digits\_decrease=romanToDecimal(input("VIIIDXLII"))

print(f"Integer form of Roman Numeral is {Test\_case\_digits\_decrease}.")

Test\_case\_all\_values=romanToDecimal(input("MCDXLVI"))

print(f"Integer form of Roman Numeral is {Test\_case\_all\_values}.")

Test\_case\_false=romanToDecimal(input("fgmd"))

print(f"Integer form of Roman Numeral is {Test\_case\_false}.")

Dry runs (3)

Stuff works