Code Challenge

Mo Tu We Th Fr Sa Su

Memo No.

Date. 3/25/23

- convert roman → decimal AND decimal → roman
- rules
  - add symbols together (III = 3, VII = 7, CLXV = 165)
  - subtract too (if symbol A < B (next symbol), AB = B - A)
    - → IV = 4, XL = 40, XC = 90
  - subtraction only involves 2 symbols
  - a symbol of 10x may not precede any symbol > 10x+1
    - → C can't be ~~in front of~~ behind I or V, only X or values ≥ C

- ideas:
  - decimal → roman first
  - ~~check~~ get each digit using % & // — maybe not, we don't want each to be in the ones place...
  - convert each digit
  - can't % by 10 each time bc it's = 0 after the first digit
  - make exponent var that increases how much you % by
  - need to convert in same loop or make a list and use it in another loop
  - conversion.-
    - check for standard roman values first (in pre. list)
    - make string & concatenate each numeral

Mo Tu We Th Fr Sa Su

Memo No.

Date. / / /

roman numeral pattern

I II III IV V VI VII VIII IX X

= + - = + - =

X XX XXX XL XL LX LXX LXXX XC C

= + - = + - =

C CC CCC CD D DC DCC DCCC CM M

= + - = + - =

3 instances

=	when # = numeral
+	between = and - (named last in code prolly)
-	only when it's one less than numeral
	or # - 1 x 10s place

I could try to combine 5&10, 50&100, and 500&1000 because finding the subtracting numeral is using the same tens place

What if I added a base variable that changes to the correct 10s place numeral for each group listed above?

Could I do 2 loops, one in the other to loop thru the list and the roman numerals?

Mo Tu We Th Fr Sa Su

Memo No.

Date. / / /

I need to make a dictionary w/ roman nums and their values I think.

↓

Then I can iterate through a list of keys & values, and using the same index can compare #values and add the right roman numeral strings

I don't think I need a dictionary actually

I do need to make it impossible for the list elems. to be checked ~~[illegible]~~ w/o adding the wrong stuff to the final string

Mo Tu We Th Fr Sa Su

Memo No. _____

Date. / / /

roman → decimal

I want to check going ~~right to left~~ left to right.

I'll see if the char. to the right ≠> current char.

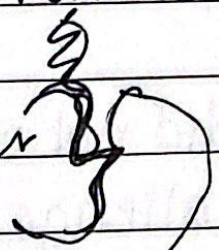
If it is, we'll do subtraction

If not, ~~first~~ see if they = each other

If they do, add them

If neither, it's just itself

Add them all up



so this step might not be needed

I need to add another check when comparing w/ the char. on the right because of rule #4. I can't do subtraction if they're not "connected".

I can only precede V + X

~~V can only precede X~~ V can't precede anything for subtrn.

X can precede L, C neither can L

C can precede ~~M~~ D, M

I could probably loop thru list of letters for each in the given roman num., and once they match, use that index to get the value from a list of roman num. values w/ matching indices

I'll need to figure out how to skip the next char. if I use subtraction

Mo Tu We Th Fr Sa Su

Memo No.

Date. / / /

I was able to complete the part of the challenge to convert decimals to roman numerals to the best of my knowledge.

I did not complete the part of the challenge to convert roman numerals to decimals. I wrote out as much of the logic as I could and got far enough to convert a single letter to its decimal value.