**Problem #415: Add Strings. (Easy)**

<https://leetcode.com/problems/add-strings/description/>

My Solution:

1. If both num1 and num2 are “0”, then return num1.
2. If num1 is “0” and num2 is not “0”, then return num2
3. If nm2 is “0” and num1 is not “0”, then return num1
4. Initialize carryover to 0, x1 to num1 reversed and x2 to num2 reversed.
5. If one of the two strings is shorter, then pad the shorter string with “0” so that both strings are of the same length.
6. Initialize res to an empty list and carryover to 0.
7. Iterate through the strings. At each index starting from 0 to the end of the string,

Find the sum which is the integer value of x1 at that index and the integer value of x2 at the same index and also the carryover. If the sum is more than 9, then carryover is 1, otherwise carryover is 0. Get the sum modulo 10, convert it to a string and append to res.

1. After the iteration, if carryover is 1, then append carryover as a string to res.
2. Reverse res and join to form a string. Then return this string.

class Solution:

def addStrings(self, num1: str, num2: str) -> str:

if num1 == "0" and num2 == "0":

return num1

elif num1 == "0" and num2 != "0":

return num2

elif num1 != "0" and num2 == "0":

return num1

carryover = 0

x1 = num1[::-1]

x2 = num2[::-1]

if len(num1) > len(num2):

x2 = x2 + "0"\*(len(num1) - len(num2))

elif len(num2) > len(num1):

x1 = x1 + "0"\*(len(num2) - len(num1))

res = []

carryover = 0

for i in range(len(x1)):

sum = int(x1[i]) + int(x2[i]) + carryover

if sum > 9:

carryover = 1

else:

carryover = 0

res.append(str(sum % 10))

if carryover == 1:

res.append(str(carryover))

return "".join(res[::-1])