Question 1

Create a function that takes a number as an argument and returns True or False depending on whether the number is symmetrical or not. A number is symmetrical when it is the same as its reverse.

**Examples**

is\_symmetrical(7227) ➞ True

is\_symmetrical(12567) ➞ False

is\_symmetrical(44444444) ➞ True

is\_symmetrical(9939) ➞ False

is\_symmetrical(1112111) ➞ True

def is\_symmetrical(in\_num):

if str(in\_num) == str(in\_num)[::-1]:

print(f'{in\_num} ➞ {True}')

else:

print(f'{in\_num} ➞ {False}')

is\_symmetrical(7227)

is\_symmetrical(12567)

is\_symmetrical(44444444)

is\_symmetrical(9939)

is\_symmetrical(1112111)

Question 2

Given a string of numbers separated by a *comma and space*, return the product of the numbers.

**Examples**

multiply\_nums("2, 3") ➞ 6

multiply\_nums("1, 2, 3, 4") ➞ 24

multiply\_nums("54, 75, 453, 0") ➞ 0

multiply\_nums("10, -2") ➞ -20

def multiply\_nums(in\_string):

out\_string = in\_string.replace(' ','').split(',')

out\_num = 1

for ele in out\_string:

out\_num \*= int(ele)

print(f'{in\_string} ➞ {out\_num}')

multiply\_nums("2, 3")

multiply\_nums("1, 2, 3, 4")

multiply\_nums("54, 75, 453, 0")

multiply\_nums("10, -2")

Question 3

Create a function that squares every digit of a number.

**Examples**

square\_digits(9119) ➞ 811181

square\_digits(2483) ➞ 416649

square\_digits(3212) ➞ 9414

**Notes**

The function receives an integer and must return an integer.

def square\_digits(in\_num):

in\_list = [str(int(ele)\*\*2) for ele in str(in\_num)]

out\_list = ''.join(in\_list)

print(f'{in\_num} ➞ {int(out\_list)}')

square\_digits(9119)

square\_digits(2483)

square\_digits(3212)

Question 4

Create a function that sorts a list and removes all duplicate items from it.

**Examples**

setify([1, 3, 3, 5, 5]) ➞ [1, 3, 5]

setify([4, 4, 4, 4]) ➞ [4]

setify([5, 7, 8, 9, 10, 15]) ➞ [5, 7, 8, 9, 10, 15]

setify([3, 3, 3, 2, 1]) ➞ [1, 2, 3]

def setify(in\_list):

out\_list = sorted(set(in\_list))

print(f'{in\_list} ➞ {out\_list}')

setify([1, 3, 3, 5, 5])

setify([4, 4, 4, 4])

setify([5, 7, 8, 9, 10, 15])

setify([3, 3, 3, 2, 1])

Question 5

Create a function that returns the mean of all digits.

**Examples**

mean(42) ➞ 3

mean(12345) ➞ 3

mean(666) ➞ 6

**Notes**

* The mean of all digits is the sum of digits / how many digits there are (e.g. mean of digits in 512 is (5+1+2)/3(number of digits) = 8/3=2).
* The mean will always be an integer.

def mean(in\_num):

in\_list = [int(ele) for ele in str(in\_num)]

out\_num = sum(in\_list)/len(str(in\_num))

print(f'Mean of {in\_num} ➞ {out\_num:.0f}')

mean(42)

mean(12345)

mean(666)