Questions

Write one for loop to print out each character of the string my\_str on a separate line.

my\_str = "MICHIGAN"

for character in my\_str:

print(character)

Write one for loop to print out each element of the list several\_things. Then, write another for loop to print out the TYPE of each element of the list several\_things. To complete this problem you should have written two different for loops, each of which iterates over the list several\_things, but each of those 2 for loops should have a different result.

several\_things = ["hello", 2, 4, 6.0, 7.5, 234352354, "the end", "", 99]

for thing in several\_things:

print(thing)

for thing in several\_things:

print( type(thing) )

Write code that uses iteration to print out **the length** of each element of the list stored in str\_list.

str\_list = ["hello", "", "goodbye", "wonderful", "I love Python"]

# Write your code here.

for length in str\_list:

print(len(length))

Write code to count the number of characters in original\_str using the accumulation pattern and assign the answer to a variable num\_chars. Do NOT use the len function to solve the problem (if you use it while you are working on this problem, comment it out afterward!)

original\_str = "The quick brown rhino jumped over the extremely lazy fox."

count = 0

for character in original\_str:

count+=1

num\_chars= count

print(num\_chars)

addition\_str is a string with a list of numbers separated by the + sign. Write code that uses the accumulation pattern to take the sum of all of the numbers and assigns it to sum\_val (an integer). (You should use the .split("+") function to split by "+" and int() to cast to an integer).

addition\_str = "2+5+10+20"

x = addition\_str.split("+")

sum\_val = 0

s =0

print(x)

for i in x:

sum\_val= sum\_val + int(i)

print(sum\_val)

week\_temps\_f is a string with a list of fahrenheit temperatures separated by the , sign. Write code that uses the accumulation pattern to compute the **average** (sum divided by number of items) and assigns it to avg\_temp. Do not hard code your answer (i.e., make your code compute both the sum or the number of items in week\_temps\_f) (You should use the .split(",") function to split by "," and float() to cast to a float).

week\_temps\_f = "75.1,77.7,83.2,82.5,81.0,79.5,85.7"

temp =week\_temps\_f.split(",")

s = 0

count = 0

for t in temp :

s = s + float(t)

count+=1

avg\_temp= s/count

print(avg\_temp)

Write code to create a list of numbers from 0 to 67 and assign that list to the variable nums. Do not hard code the list.

nums =list()

for i in range(0,68):

nums.append(i)

print(nums)

Write code to create a **list of word lengths** for the words in original\_str using the accumulation pattern and assign the answer to a variable num\_words\_list. (You should use the len function).

original\_str = "The quick brown rhino jumped over the extremely lazy fox"

words=original\_str.split(" ")

num\_words\_list=list()

for word in words:

num\_words\_list.append(len(word))

print(num\_words\_list)

Create an empty string and assign it to the variable lett. Then using range, write code such that when your code is run, lett has 7 b’s ("bbbbbbb").

lett=""

for l in range(7):

lett+="b"

print(lett)

Write a program that uses the turtle module **and** a for loop to draw something. It doesn’t have to be complicated, but draw something different than we have done in the past. (Hint: if you are drawing something complicated, it could get tedious to watch it draw over and over. Try setting .speed(10) for the turtle to draw fast, or .speed(0) for it to draw super fast with no animation.)

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import turtle

wn= turtle.Screen()

wn.bgcolor("lightblue")

pen = turtle.Turtle()

#pen.color("red")

pen.color('red', 'yellow')

pen.shape("turtle")

#pen.size(2)

pen.speed(10)

dis = 0

for i in range(31):

dis+=2

pen.forward(dis)

pen.left(45)

if i==30:

dis=0

for i in range(30):

pen.color("green")

dis+=2

pen.forward(dis)

pen.right(180+45)

wn.exitonclick()