

Exercises

Answer the questions or complete the tasks outlined in bold below, use the specific method described if applicable.

**\*\* What is 7 to the power of 4?\*\***

print(pow(7,4))

2401

**\*\* Split this string:\*\***

s = "Hi there Sam!"

**into a list.**

s="Hi there Sam!"

s=s.split()

print(s);

['Hi', 'there', 'Sam!']

s = "Hi there Sam!"

l=s.split(" ")

l[2]="dad!"

l

['Hi', 'there', 'dad!']

**\*\* Given the variables:\*\***

planet = "Earth"

diameter = 12742

**\*\* Use .format() to print the following string: \*\***

The diameter of Earth is 12742 kilometers.

planet = "Earth"

diameter = 12742

planet = "Earth"

diameter = 12742

print( 'The diameter of {} is {} kilometers.' .format(planet,diameter))

The diameter of Earth is 12742 kilometers.

**\*\* Given this nested list, use indexing to grab the word "hello" \*\***

lst = [1,2,[3,4],[5,[100,200,['hello']],23,11],1,7]

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a=lst[3][1][2][0];

print(a)

hello

**\*\* Given this nest dictionary grab the word "hello". Be prepared, this will be**

**annoying/tricky \*\***

d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'he

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print(d['k1'][3]["tricky"][3]['target'][3])

hello

**\*\* What is the main difference between a tuple and a list? \*\***

*#Tuples are immutable ,list are mutable*

*#Tuples operations are safe.*

**\*\* Create a function that grabs the email website domain from a string in the form: \*\***

[email protected]

**So for example, passing "[email protected]" would return: domain.com**

def function(a):

b=a.split("@")

return b[-1]

function("[email protected]")

'domain.com'

**\*\* Create a basic function that returns True if the word 'dog' is contained in the input**

**string. Don't worry about edge cases like a punctuation being attached to the word dog,**

**but do account for capitalization. \*\***

def function(a):

if "dog" in a.lower():

return True

function("Dog is a mammal")

True

**\*\* Create a function that counts the number of times the word "dog" occurs in a string.**

**Again ignore edge cases. \*\***

def function(a):

c=a.lower()

b=c.count("dog")

return b

function("Dog is a mammal - Dog is black")

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Final Problem

**You are driving a little too fast, and a police officer stops you. Write a function to**

**return one of 3 possible results: "No ticket", "Small ticket", or "Big Ticket". If your**

**speed is 60 or less, the result is "No Ticket". If speed is between 61 and 80 inclusive,**

**the result is "Small Ticket". If speed is 81 or more, the result is "Big Ticket". Unless**

**it is your birthday (encoded as a boolean value in the parameters of the function) --**

**on your birthday, your speed can be 5 higher in all cases.**

def caught\_speeding(speed, is\_birthday):

if is\_birthday:

speeding = speed - 5

else:

speeding = speed

if speeding > 80:

return 'Big Ticket'

elif speeding > 60:

return 'Small Ticket'

else:

return 'No Ticket'

caught\_speeding(81,True)

'Small Ticket'

caught\_speeding(81,False)

'Big Ticket'

Great job!