**ASSIGNMENT 3**

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**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.split(" ");

s= "Hi there dad!"  
s.split(" ");

\*\* 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

print("The diameter of ", planet ," is ", diameter , " kilometers.")

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]

print(lst[3][1][2])

['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,'hello']}]}]}

tup =(1,2,3,4,5)  
print("tuple==>",tup)  
lis=[1,2,3,4]  
print("List==>",lis)

tuple==> (1, 2, 3, 4, 5)  
List==> [1, 2, 3, 4]

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

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

user@domain.com

**So for example, passing "**[**user@domain.com**](mailto:user@domain.com)**" would return: domain.com**

def domain(text):  
 x = text.split("@")  
 print(x[-1])

\*\* 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 dogcount(value):  
 count = 0  
 for word in value.lower().split():  
 if word == 'dog' or word == 'dogs':  
 count = count + 1  
 print(count)

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

findDog("my dog name is Tom")

---------------------------------------------------------------------------  
NameError Traceback (most recent call last)  
<ipython-input-21-0075f38eebbe> in <module>  
----> 1 findDog("my dog name is Tom")  
  
NameError: name 'findDog' is not defined

**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(85,False)

{"type":"string"}

caught\_speeding(70,True)

{"type":"string"}

**Create an employee list with basic salary values(at least 5 values for 5 employees) and using a for loop retreive each employee salary and calculate total salary expenditure.**

emp = [10000,25000,12000,20000,18000]  
for i in emp:  
 if(i>=10000 & i<15000):  
 print("total salary ==>",i )  
 print("total expenditure ==>" , int(i\*0.6))   
  
 if(i>15000 & i<25000):  
 print("total salary ==>",i )  
 print("total expenditure ==>" , int(i\*0.7))   
 else:  
 print("total salary ==>",i )  
 print("total expenditure ==>" , int(i\*0.8))

total salary ==> 10000  
total expenditure ==> 6000  
total salary ==> 10000  
total expenditure ==> 7000  
total salary ==> 25000  
total expenditure ==> 15000  
total salary ==> 25000  
total expenditure ==> 17500  
total salary ==> 12000  
total expenditure ==> 7200  
total salary ==> 12000  
total expenditure ==> 8400  
total salary ==> 20000  
total expenditure ==> 12000  
total salary ==> 20000  
total expenditure ==> 14000  
total salary ==> 18000  
total expenditure ==> 10800  
total salary ==> 18000  
total expenditure ==> 12600

Create two dictionaries in Python:

First one to contain fields as Empid, Empname, Basicpay

Second dictionary to contain fields as DeptName, DeptId.

Combine both dictionaries.

d1 = { "Empid":1,"Empname":"Lokesh","Basicpay": 20000}  
d2 = {"deptname":"CSE" , "DEPTID": 'CSE1024'}  
d3 = {\*\*d1 , \*\*d2}  
print(d3)

{'Empid': 1, 'Empname': 'Lokesh', 'Basicpay': 20000, 'deptname': 'CSE', 'DEPTID': 'CSE1024'}