Assignment Date	30.9.2022
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Exercises

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

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

```
pow(7,4)

    2401
```

** Split this string:**

```
s = "Hi there Sam!"
```

*into a list. *

```
s = "Hi, there, Sam!"
spt = s.split(", ")
print(spt)
```

Show hidden output

** 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." .format(planet="Earth" ,
```

`diamet` Show hidden output

```
    The diameter of Earth is 12742 kilometers.
```

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

Double-click (or enter) to edit

```
lst = [1,2,[3,4],[5,[100,200,['hello']],23,11],1,7]
print(lst[3][1][2][0])
```

Show hidden output

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

```
    hello
```

```
    'hello'
```

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

```
LIST:  1) List is dynamic
       2) List can be modified
TUPLE: 1) Tuple is static
       2) Tuple cannot be modified
```

** 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" would return: domain.com

```
def domainGet(email):
  return email.split('@')[-1]
domainGet('user@domain.com')
```

```
    'domain.com'
```

```
        'domain.com'
```

** Create a basic function that returns True if the word 'dog' is contained in the input string. Don'tworry about edge cases like a punctuation being attached to the word dog, but do account for

capitalization. **

```python
def animal(st):
  for word in st.lower().split():
    if word=='dog':
      return True
animal("dog is my favourite pet")
```

```
    True
```

```
    True
```

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

```python
def animal(st):
  count=0
  for word in st.lower().split():
    if word=='dog':
      count+=1
  return count
animal("German Shepard dog is the strongest dog")
```

```
    2
```

```
    2
```

Problem

You are driving a little too fast, and a police oficer 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. ***

```python
def caught_speeding(speed, is_birthday):

    if is_birthday:
        speeding = speed - 5
    else:
        speeding = speed
```

```python
    if speeding > 80:
        return 'Big Ticket'
    elif speeding > 60:
        return 'Small Ticket'
    else:
        return 'No Ticket'
caught_speeding(81, False)
```

```
    'Big Ticket'
```

```
    'Big Ticket'
```

```
    'Small Ticket'
```

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.

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.

```python
dict1={
    'Empid': 1001,
    'Empname': 'Ashok',
    'Basicpay': 20000
}
dict2={
    'DepName': 'Testing',
    'DeptID': 120
```

```
}
dict3 = dict1.copy()
dict3.update(dict2)
print(dict3)
```

```
{'Empid': 1001, 'Empname': 'Ashok', 'Basicpay': 20000, 'DepName': 'Testing', 'DeptID
```

Colab paid products - Cancel contracts here0s ✔ completed at 12:42 PM