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ASSIGNMENT - 3

Assignment Date	3 October 2022
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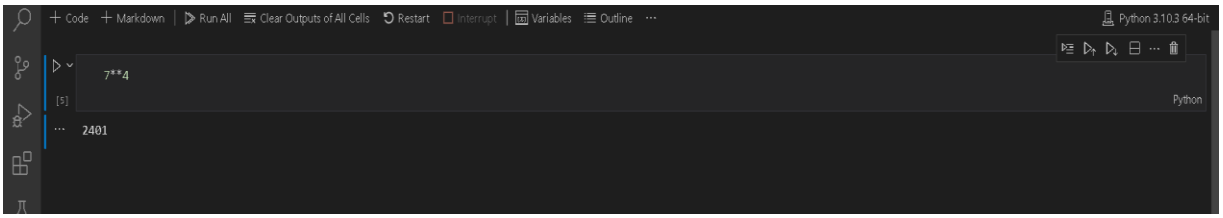
Assignment Link:

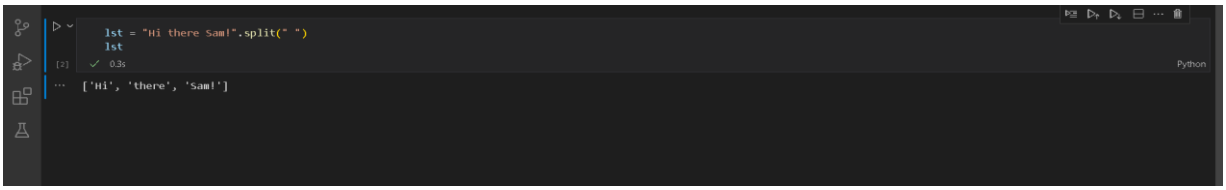
https://colab.research.google.com/drive/1gQ21swUdLOf7WrWy9uOtv60sR0lK8K7p?usp=sharing

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



Split this string:

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

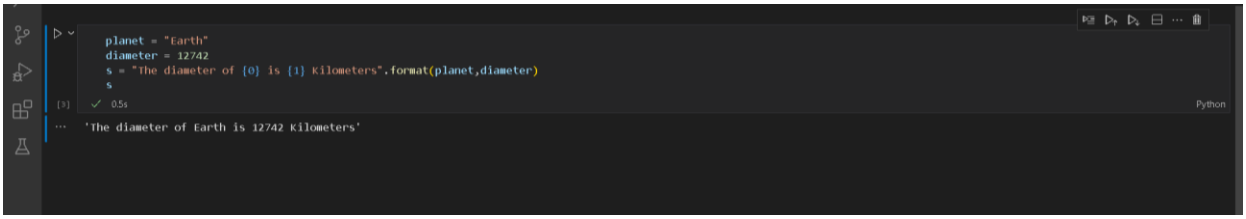


** Given the variables:**

```
planet = "Earth"
diameter = 12742
```

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

```
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]
lst[3][1][2][0]
```

```
'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']}]}]}
d['k1'][3]['tricky'][3]['target'][3]
```

```
'hello'
```

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

The main difference is list are mutable whereas tuples are immutable. List are defined using [] and tuples are defined using ()

** 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 extract(str):
    return str.split("@").pop()

extract("user@domain.com")
```

```
'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 check(string):
    if string.find('dog') == -1:
        return False
    else:
        return True
str = input()
check(str)
```

```
True
```

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

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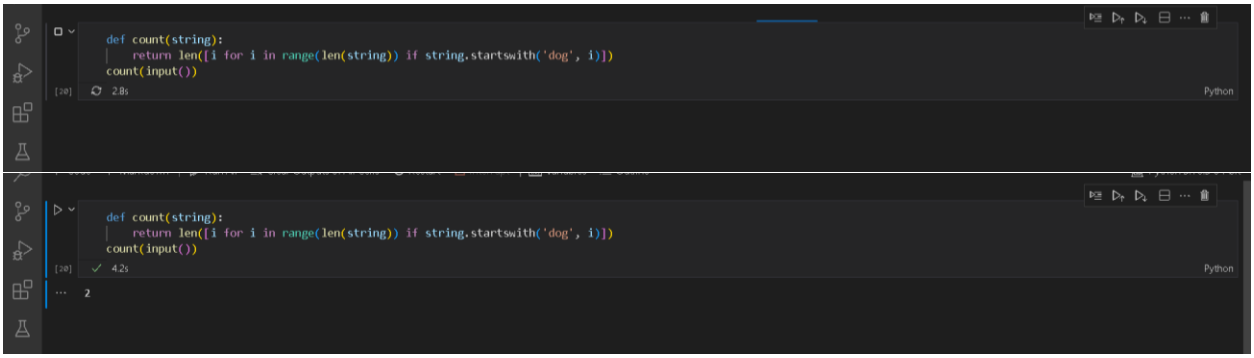
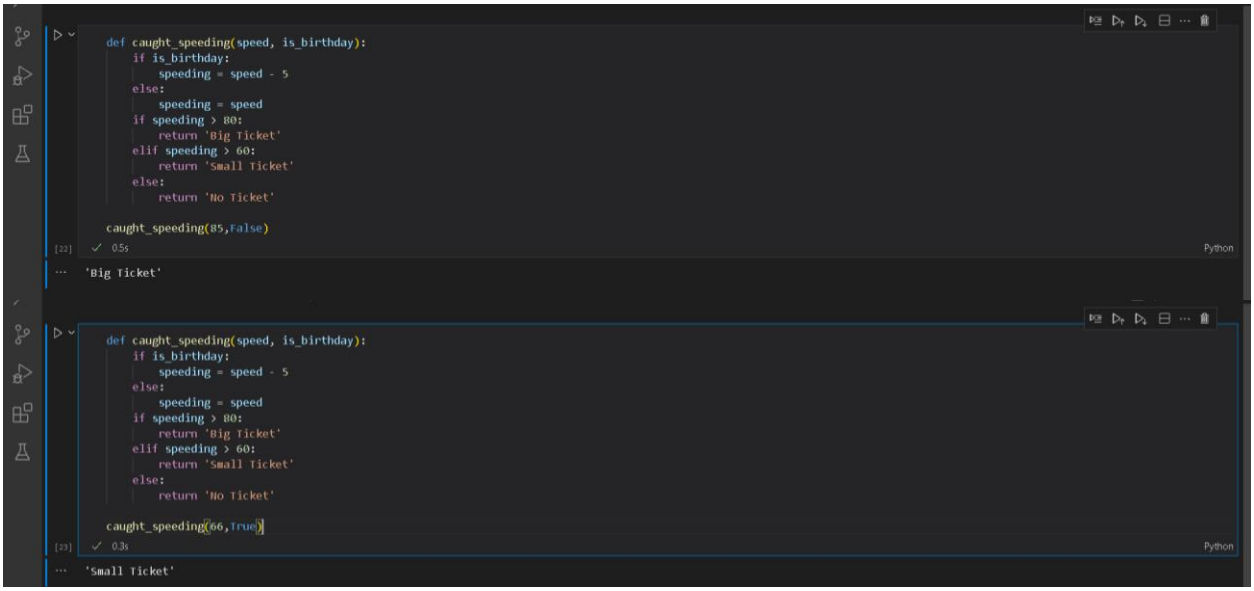


```
def count(string):
    return len([i for i in range(len(string)) if string.startswith('dog', i)])
count(input())
```

```
2
```

**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)
```

```
'Big Ticket'
```

```
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(66,True)
```

```
'Small Ticket'
```

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

```
Employee=[11000,12000,13000,14000,15000]
total=0
for i in Employee:
  total +=i
print(total)
```

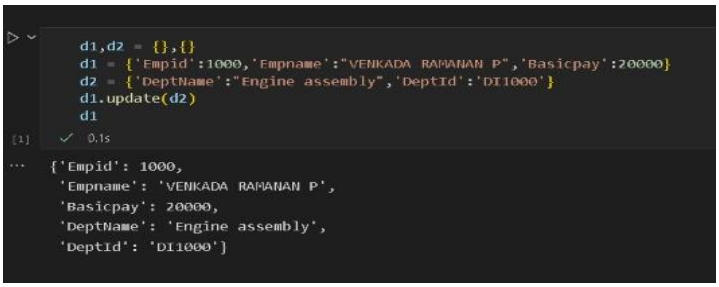
```
65000
```

** 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,d2 = {},{}
d1 = {'Empid':1000,'Empname':"VENKADA RAMANAN P",'Basicpay':20000}
d2 = {'DeptName':"Engine assembly",'DeptId':'DI1000'}
d1.update(d2)
d1
```

```
[1]  ✓ 0.1s
```

```
{'Empid': 1000,
 'Empname': 'VENKADA RAMANAN P',
 'Basicpay': 20000,
 'DeptName': 'Engine assembly',
 'DeptId': 'DI1000'}
```