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## Assignment -3

### 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? \*\***

```
7 ** 4
```

```
2401
```

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

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

*\*into a list. \**

```
s =
"Hi
there
Sam!"
s.spli
t()

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

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

```
p
l
a
n
e
t
=
"
E
a
r
t
h
"
d
i
a
m
e
t
e
r
=
1
2
7
4
2
```

Saved successfully!

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

The diameter of Earth is 12742 kilometers.

```
pla
net
=
```

```

"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']],23,1
1],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? \*\***

```

#Tuple is immutable where list is mutable

```

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

user@  
domai  
n.com

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

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

```
domainGet('user  
  
@domain.co  
  
m')  
  
'domain.co  
  
m'
```

**\*\* 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  
findD  
og(st  
):  
    return 'dog' in st.lower().split()
```

```
findDog('Is there  
  
a dog here?')  
  
True
```

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

```

def
count
tDog
(st)
:
count
t =
0

for word in
    st.lower().spl
    it():if word
    == 'dog':
        c
count
+= 1
return
n
count

```

```

countDog('This dog runs faster than the
        other dog dude!')2

```

## 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:
        speedin
    g = speed -
    5else:

```

```

        speeding = speed

    if speeding > 80:
        return
    'Big
    Ticket'
    elif
    speeding >
    60:
        return
    'Small
    Ticket'else:
        return 'No Ticket'

```

Saved successfully!  
 caught\_speeding(81,False)

```

    'Big Ticket'

```

caught\_spee

```

    ding(7

```

```

    0,True

```

```

    )

```

```

    'Small

```

```

    Ticket

```

```

    ,

```

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

```

employee = [30000,23000,25000,40000,33000]
tot = 0
for i
    i
    n
    e
    m
    p

```

```

l
o
y
e
e
:
t
o
t
=
t
o
t
+
i
print("Total Salary :",tot)

```

Total Salary : 151000

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.

```

dict1 = {
    "EmpId": [1001, 1002, 1003, 1004, 1005],
    "EmpName": ["vipush", "hari", "younush", "nivish", "kishore"],
    "Basicpay": [42000, 41000, 40000, 43000, 39000]
}

dict2 = {
    "DeptName": ["EEE", "CIVIL", "CSE", "IT", "MBA", "MECH"],
    "DeptId": ["19CE", "20CE", "19CSE", "19IT", "19BIO", "19MECH"]
}

dict1.update(dict2)
dict3 = dict1.copy()

```

```
opy()  
dict3
```

```
{'EmpId': [1001, 1002, 1003, 1004, 1005],  
 'EmpName': ['vipush', 'hari', 'younush',  
 'nivish', 'kishore'], 'Basicpay': [42000, 41000,  
 40000, 43000, 39000],  
 'DeptName': ['EEE', 'CIVIL', 'CSE', 'IT', 'MBA', 'MECH'],  
 'DeptId': ['19CE', '20CE', '19CSE', '19IT', '19BIO', '19MECH']}
```

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