

Assignment date	07 November 2022
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Maximum Marks	2 Marks

## 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?

In [ ]:

```
7**4
```

Out[ ]: 2401

Split this string:

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

into a list.

In [ ]:

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

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

Given the variables:

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

Use .format() to print the following string:

```
In [ ]: planet="Earth"
        diameter=12742
        print("The diameter of "
```

The diameter of Earth is  
12742 kilometers.

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

```
In [ ]: lst = [1,2,[3,4],[5,[100
```

```
In [ ]: lst = [1,2,[3,4],[5,[100
        a=lst[3][1][2]
        print(a)
```

['hello']

Given this nest dictionary  
grab the word "hello".

```
In [ ]: d = {'k1':[1,2,3,{'trick
```

```
In [ ]: d = {'k1':[1,2,3,{'trick
        print(d['k1'][3]["tricky
```

hello

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

---

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```
In [ ]: #TUPLE  
#Tuple is immutable.  
#The items in tuples are  
#In tuple the implicatio  
#Tuples consumes less me  
  
#LIST  
#The items in lists are  
#Lists are mutable  
#In list the implication  
#Lists consume more memo
```

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

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

```
In [ ]: domainGet('user@domain.com')
```

```
Out[ ]: 'domain.com'
```

```
In [ ]: def countDog(st):  
        count = 0  
        for word in st.lower:  
            if word == 'dog':  
                count += 1  
        return count
```

```
In [ ]: countDog('This dog runs
```

```
Out[ ]: 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

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.

```
In [ ]: def findDog(st):  
        if 'dog' in st.lower:  
            print("True")  
        else:  
            print("False")  
  
        st = "Is there a dog her  
        findDog(st)
```

True

```
In [ ]: findDog('Is there a dog
```

True

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

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.

In [ ]:

```
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'
```