▾ Exercises

Answer the questions or complete the tasks outlined in bold below, use the specific meth 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!"
x = s.split()
print(x)
```

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

** Given the variables:**

 planet = "Earth"
 diameter = 12742

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

 The diameter of Earth is 12742 kilometers.

Double-click (or enter) to edit

```
x = "The diameter of the Earth is 12742 kilometers."
x format(
```

```
x.format(
)
```

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

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

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

```
print(lst[3][1][2][0])
```

```
    ---------------------------------------------------------------------------
    NameError                                 Traceback (most recent call last)
    <ipython-input-21-5e675acb237d> in <module>
    ----> 1 print(lst[3][1][2][0])
          2

    NameError: name 'lst' is not defined
```

SEARCH STACK OVERFLOW

** 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
```

```
print('hello')
```

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

```
tuple = (1,2,3)
list = [1,2,3]
```

** 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

```
email = "user@domain.com"
email.split('@')[-1]
```

```
'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. **

```
x = "this dog is so brave"
if 'dog' in x:
  print("")
```

```
True
```

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

```
x = "dog"
str = "the dog is barking,looking at another dog"
count = str.count(x)
```

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

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

81

   81

61

   61

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.

```
employees = ["abc", "def", "ghi", "jkl", "mno"]

employees_dictionary = dict()
total = 0
amount = 0

try:
    for employee in employees:
        amount= int(input(amount))
        employees_dictionary[employee] = amount
        total += amount
except:
    print("You can only type integer for amount")

print(employees_dictionary)
print(total)
```

```
You can only type integer for amount
{'abc': 10000}
10000
```

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": 1,"empname": 'john',"basicpay": 10000}
dict2 = {"deptname": 'comp',"deptid": 11}
dict1.update(dict2)
```