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?**

```
p=int(input("Enter the Base Value:"))
s=int(input("Enter the Exponent Value:"))
r=pow(p,s)
print(r)
```

```
Enter the Base Value:7
Enter the Exponent Value:4
2401
```

** Split this string:**

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

*into a list. *

```
s="Hi there sam!"
p=s.split()
```



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

** 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, 'kilometer' )
```

```
     The diameter of Earth is 12742 kilometer
```

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

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

print(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']}]}]}

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

```
     hello
```

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

** 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=input("Enter Email:")
domainGet(email)
```

```
     Enter Email:user@domain.com
     Your domain is:domain.com
```

```
def domainGet(email):
  print("Your domain is:"+email.split('@')[-1])
```

** 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 dog(st):
  if'dog'in st.lower():
    print("True")
  else:
      print("False")


  a=input("Enter String:")
  dog(a)

     Enter String:dog
     True
```

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

```
  a=input("Enter String:")

  count(a)

     Enter String:day day day day
     1
     2
```

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```
def count(a):
  c=0
  for word in a.lower().split():
    if word =='day':
      c=c+1
      print(c)
```

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

```
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'


print("Please enter the speed(km/h)(only number please):\n")
speed =int(input(""))
print("please enter your birthday:(in DD/MM/YYYY format)\n")
is_birthday=str(input(""))
caught_speeding(speed, is_birthday)
```

```
Please enter the speed(km/h)(only number please):

100
please enter your birthday:(in DD/MM/YYYY format)

26/08/2001
'Big Ticket'
```

and using a for


```
emp=[10000,20000,30000,40000,50000]
emp[1]
```

```
20000
```

```
sum=0
for i in emp:
  sum=sum+i
print(sum)
```

```
150000
```

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.

```
dic1={'Empid':'101','Empname':'ragu','Basicpay':15000}
dic2={'Empid':'102','Empname':'nithesh','Basicpay':1000}


  dic2.update(dic1)


print(dic2)
```

```
    {'Empid': '101', 'Empname': 'ragu', 'Basicpay': 15000}
```