Assignment-3

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 [2]: print(7**4)

        2401
```

** Split this string:**

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

*into a list. *

```
In [6]: s="Hi there Sam!"
        print(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.
```

```
In [8]: print("the diameter of {planet} is {diameter} kilometers.".format(planet="Earth",diamete

        the diameter of Earth is 12742 kilometers.
```

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

```
In [14]: 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 **

```
In [52]: 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? **

```
In [ ]: The list is dynamic, whereas the tuple has static characteristics. This means that lists
        cannot be modified, the tuple is faster than the list because of static in nature. Lists
        but tuples are denoted as parenthesis.
```

** 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 (mailto:user@domain.com)](mailto:user@domain.com)" would return:
domain.com

In [17]:
```python
s=input()
count=0
str=""
for i in s:
    if(i=="@"):
        count=1
    elif(count==1):
        str+=i
print(str)
```

```
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. **

In [20]:
```python
def check(input1):
    if(input1.count("DOG")>0):
        print("True")
    else:
        print("False")
a=input().upper()
check(a)
```

```
Dog is pet animal
True
```

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

In [22]:
```python
def check(input1):
    print(input1.count("DOG"))
a=input().upper()
check(a)
```

```
Dog is pet animal. I love dog.
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. *

```
In [32]: 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'
         a=int(input())
         b=input()
         if(b=="1"):
             print(caught_speeding(a,True))
         else:
             print(caught_speeding(a,False))
```

```
81
0
Big Ticket
```

```
In [34]: 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'
         a=int(input())
         b=input()
         if(b=="1"):
             print(caught_speeding(a,True))
         else:
             print(caught_speeding(a,False))
```

```
56
1
Small Ticket
```

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.

```
In [38]: l=[4500,5000,7000,8600,7800]
         count=0
         for i in l:
             print(i)
             count+=i
         print("Total salary expenditure",count)
```

```
4500
5000
7000
8600
7800
Total salary expenditure 32900
```

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.

```
In [37]: d1={"Empid":1,"Empname":"Ramkumar A","Basicpay":1000}
         d2={"DeptName":"IT","DeptId":1}
         d={**d1,**d2}
         print(d)
```

```
{'Empid': 1, 'Empname': 'Ramkumar A', 'Basicpay': 1000, 'DeptName': 'IT', 'DeptId': 1}
```