Assignment -3

** 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 [3]:
```
s="Hi there dad!"
l = s.split(" ")
```

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

In [4]:
```
print(l)
```

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

** Given the variables:**

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

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

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

In [10]:
```
planet= "Earth"
diameter = 12742
```

In [11]:
```
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" **

In [12]:
```
lst = [1,2,[3,4],[5,[100,200,['hello']],23,11],1,7]
```

In [13]:
```
print(lst[3][1][2][0])
```

```
hello
```

** Given this nest dictionary grab the word "hello". Be prepared, this will be annoying/tricky **

In [14]:
```
d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
```

In [15]:
```
print(d['k1'][3]["tricky"][3]['target'][3])
```

```
hello
```

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

In [17]:
```
t = (1, 2, 3)
list = [1, 2, 3, 4, 5]

#tuple is immutable, and list is muutable
```

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

email = input("Please enter your email: ")
```

```
Please enter your email: user@domain.com
```

In [2]:
```
domainGet(email)
```

```
Your domain is: 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 [6]:
```
def findDog(st):
    if 'dog' in st.lower():
        print("True")
    else:
        print("False")
```

In [7]:
```
st = input("Please key a string: ")
findDog(st)
```

```
Please key a string: horse dog
True
```

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

In [8]:
```
string = input("Please enter your string: ")
```

```
Please enter your string: horse dog horse dog
```

In [9]:
```
def countdogs(string):
    count = 0
    for word in string.lower().split():
        if word == 'dog' or word == 'dogs':
            count = count + 1
            print(count)
countdogs(string)
```

```
1
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 [12]:
```
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")
birthday = str(input(" "))

def speeding(speed, birthday):
    if birthday == '29/08/1989':
        s = speed - 5
    else:
        s = speed

    if s <= 60:
        print("You pass.")
    elif s > 61 and s <= 80:
        print("You get a small ticket")
    else:
        print("You get a big ticket.")

speeding(speed, birthday)
```

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

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

 25/06/1978
You get a big 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 [2]:
```
employee =[400,500,550,600,250]
sum=0
print("the salary of 1st person is :",employee[0])
print("the salary of 2st person is :",employee[1])
print("the salary of 3st person is :",employee[2])
print("the salary of 4st person is :",employee[3])
print("the salary of 5st person is :",employee[4])
for x in employee:
    sum=sum+x
print("the total salary is :",sum)
```

```
the salary of 1st person is : 400
the salary of 2st person is : 500
the salary of 3st person is : 550
the salary of 4st person is : 600
the salary of 5st person is : 250
the total salary is : 2300
```

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 [3]:
```
d1={"Empid":1,"Empname":"abc","Basicpay":10000}
d2={"Deptname":"ece","Deptid":3}

print({**d1 ,**d2})
```

```
{'Empid': 1, 'Empname': 'abc', 'Basicpay': 10000, 'Deptname': 'ece', 'Deptid': 3}
```