Functions and Methods Homework

Complete the following questions:

Write a function that computes the volume of a sphere given its radius.

In [25]:
```
def vol(rad):
    pass
```

Write a function that checks whether a number is in a given range (Inclusive of high and low)

In [7]:
```
def ran_check(num,low,high):
    pass
```

If you only wanted to return a boolean:

In [8]:
```
def ran_bool(num,low,high):
    pass
```

In [9]:
```
ran_bool(3,1,10)
```

Out[9]: True

Write a Python function that accepts a string and calculate the number of upper case letters and lower case letters.

```
Sample String : 'Hello Mr. Rogers, how are you this fine Tuesday?'
Expected Output :
No. of Upper case characters : 4
No. of Lower case Characters : 33
```

If you feel ambitious, explore the Collections module to solve this problem!

In [11]:
```
def up_low(s):
    pass
```

Write a Python function that takes a list and returns a new list with unique elements of the first list.

```
Sample List : [1,1,1,1,2,2,3,3,3,3,4,5]
Unique List : [1, 2, 3, 4, 5]
```

In [13]:
```
def unique_list(l):
    pass
```

In [14]:
```
unique_list([1,1,1,1,2,2,3,3,3,3,4,5])
```

Out[14]: [1, 2, 3, 4, 5]

Write a Python function to multiply all the numbers in a list.

```
Sample List : [1, 2, 3, -4]
Expected Output : -24
```

In [17]:
```
def multiply(numbers):
    pass
```

In [18]:
```
multiply([1,2,3,-4])
```

Out[18]: -24

Write a Python function that checks whether a passed string is palindrome or not.

Note: A palindrome is word, phrase, or sequence that reads the same backward as forward, e.g., madam or nurses run.

In [19]:
```
def palindrome(s):
    pass
```

In [20]:
```
palindrome('helleh')
```

Out[20]: True

Hard:

Write a Python function to check whether a string is pangram or not.

```
Note : Pangrams are words or sentences containing every letter of the alphabet at l
east once.
For example : "The quick brown fox jumps over the lazy dog"
```

Hint: Look at the string module

In [21]:
```
import string

def ispangram(str1, alphabet=string.ascii_lowercase):
    pass
```

In [22]:
```
ispangram("The quick brown fox jumps over the lazy dog")
```

Out[22]: True

In [23]:
```
string.ascii_lowercase
```

Out[23]: 'abcdefghijklmnopqrstuvwxyz'

Great Job!