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**Complete-Python-3-Bootcamp** / 03-Methods and Functions / .ipynb_checkpoints / **05-Functions and Methods Homework-checkpoint.ipynb**

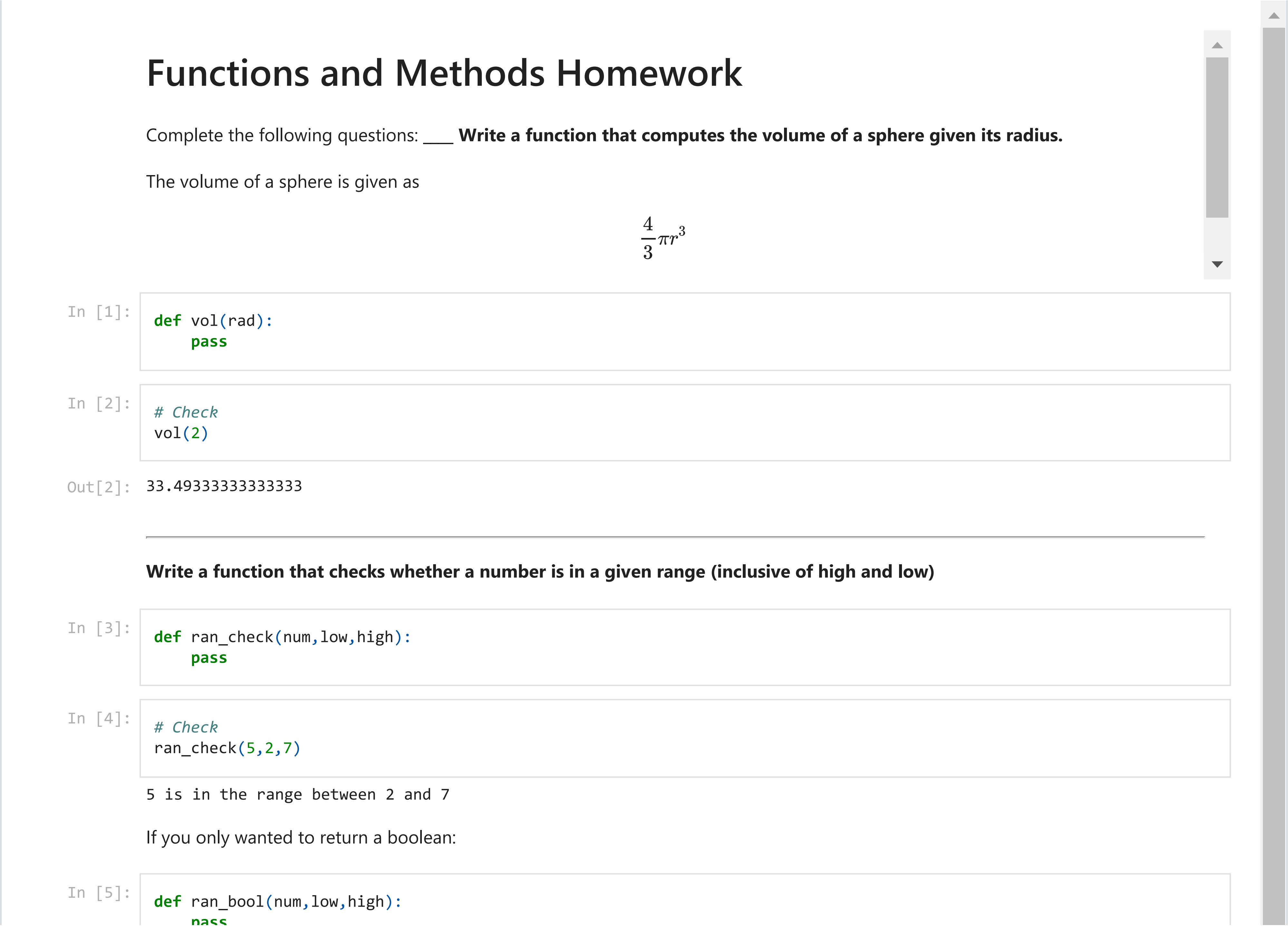
Go to file ...

**Pierian-Data** PYTHON 3 UPDATES Latest commit 6bdd11b on Feb 13, 2018 **History**

1 contributor

386 lines (386 sloc) | 7.38 KB

Raw Blame



# Functions and Methods Homework

Complete the following questions: ____ **Write a function that computes the volume of a sphere given its radius.**

The volume of a sphere is given as

$$\frac{4}{3}\pi r^3$$

In [1]:

```
def vol(rad):
    pass
```

In [2]:

```
# Check
vol(2)
```

Out[2]:

```
33.49333333333333
```

---

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

In [3]:

```
def ran_check(num,low,high):
    pass
```

In [4]:

```
# Check
ran_check(5,2,7)
```

```
5 is in the range between 2 and 7
```

If you only wanted to return a boolean:

In [5]:

```
def ran_bool(num,low,high):
    pass
    pass
```

In [6]:

```
ran_bool(3,1,10)
```

Out[6]:

```
True
```

---

**Write a Python function that accepts a string and calculates 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
```

HINT: Two string methods that might prove useful: **.isupper()** and **.islower()**

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

In [7]:

```
def up_low(s):
    pass
```

In [8]:

```
s = 'Hello Mr. Rogers, how are you this fine Tuesday?'
up_low(s)
```

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

---

**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 [9]:

In [9]:

```python
def unique_list(lst):
    pass
```

In [10]:

```python
unique_list([1,1,1,1,2,2,3,3,3,3,4,5])
```

Out[10]:

```
[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 [11]:

```python
def multiply(numbers):
    pass
```

In [12]:

```python
multiply([1,2,3,-4])
```

Out[12]:

```
-24
```

---

**Write a Python function that checks whether a passed in 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 [13]:

```python
def palindrome(s):
    pass
```

In [14]:

```python
palindrome('helleh')
```

Out[14]:

```
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 least once.
For example : "The quick brown fox jumps over the lazy dog"
```

Hint: Look at the string module

In [15]:
```
import string

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

In [16]:
```
ispangram("The quick brown fox jumps over the lazy dog")
```

Out[16]:
```
True
```

In [17]:
```
string.ascii_lowercase
```

Out[17]:
```
'abcdefghijklmnopqrstuvwxyz'
```

### Great Job!