Python Crash Course Exercises

Exercises

Answer the questions or complete the tasks outlined in bold below, use the specific method described if applicable.

What is 1337 to the power of 42?

```
19838969283201668912802581405118643546980893102725998019480504121276792449227964880443709565383
97425350061200008196290402747186499 69
```

Split this string:

```
s = "Look mom I'm writing python!"
```

into a list.

```
['Look', 'mom', "I'm", 'writing', 'python!']
```

Given the variables:

```
planet = "Moon"
diameter = 3474
```

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

```
The diameter of the Moon is 3474 kilometers.
```

```
'The diameter of the Moon is 3474 kilometers.'
```

Given this nested list, use indexing to grab the word `python`

In [ ]:
```
lst = [1, 2, ['a', 'b'], [5.0, [100, 200, ['python']], 23, 11], 1, 7]
```

```
'python'
```

Given this nested dictionary, grab the word `python`

In [ ]:
```
d = {'k1': [1, 2, 3, {'oh': ['oh', 'no', {'here': [1.0, 2.0, 3.0, 'python']}]}]}
```

```
'python'
```

What is the difference between a tuple and a list?

Write a function that returns the domain from an email

So for example, passing "hello@python.org" would return: python.org

In [ ]:
```
domainGet('hello@python.org')
```

```
'python.org'
```

Write a function that returns True if the word 'cat' is in the parameter string. Ignore edge cases and punctuation, but account for capitalization.

In [ ]:
```
findCat('Is there a cat here?')
```

```
True
```

Write a function that returns the number of 'cat' in a string.

In [ ]:
```
countCat('This cat sleep more than the other cat over there!')
```

```
2
```

Use a lambda and the `filter()` function to only keep words that start with the letter 's'. For example:

```
seq = ['soup', 'cat', 'strawberry', 'dog', 'funny']
```

should be filtered down to:

```
['soup', 'strawberry']
```

In [ ]:
```
seq = ['soup', 'cat', 'strawberry', 'dog', 'funny']
```

```
['soup', 'strawberry']
```

You are driving, and a police officer stops you. Write a function that returns one of 3 possible results: "No ticket", "Ok ticket", or "Huge ticket". If your speed is 60 or less, the result is "No ticket". If speed is between 61 and 80 inclusive, the result is "Ok ticket". If speed is 81 or more, the result is "Huge ticket". On your birthday (passed as boolean parameter) your speed can be 5 higher.

In [ ]:
```
def check_speeding(speed, birthday):
    ...
```

In [ ]:
```
check_speeding(81, True)
```

```
'Ok ticket'
```

In [ ]:
```
check_speeding(81, False)
```

```
'Huge ticket'
```