

Strings

Strings are text that you enter. We are going to learn more about strings and what we can do with them. You can have strings within lists.

```
In [1]: firststring='Hello World'
        print (firststring)
```

Hello World

```
In [2]: firststring[0]
```

Out[2]: 'H'

```
In [3]: firststring[:]
```

Out[3]: 'Hello World'

Can you remember how to slice and access and do a few examples yourself?

```
In [4]:
```

Out[4]: 'HloWrD'

```
In [6]: firststring='hello again'
        print (firststring)
```

hello again

So you can change the whole value of firststring. But could we change one slice?

```
In [7]: firststring[1]='E'
```

```
-----
TypeError                                Traceback (most recent call last)
<ipython-input-7-59f9166aa9af> in <module>()
----> 1 firststring[1]='E'
```

TypeError: 'str' object does not support item assignment

What does this error mean? It means it is immutable. You can change the whole item but not parts of it. What else can we do with strings? We can add them together. (when typing firststring press tab and see if it fills in....)

```
In [8]: bigstring=firststring+' '+firststring
        print (bigstring)
```

hello again hello again

Lets see what we can just learn from tabbing... so type bigstring. and then hit tab

```
In [9]: bigstring.capitalize()
```

Out[9]: 'Hello again hello again'

But I wanted them all capitalized. Can you capitalized all of them?

```
In [10]: bigstring.upper()
```

```
Out[10]: 'HELLO AGAIN HELLO AGAIN'
```

```
In [11]: print (bigstring)
```

```
hello again hello again
```

What happened to big string? It isn't capitalized???? you have to set it.

```
In [12]: bigstring=bigstring.upper()  
print (bigstring)
```

```
HELLO AGAIN HELLO AGAIN
```

what if we have a list of strings?

```
In [13]: list2=['one','two','three']  
print (list2)
```

```
['one', 'two', 'three']
```

```
In [14]: list2[0]
```

```
Out[14]: 'one'
```

```
In [15]: list2[0][1]
```

```
Out[15]: 'n'
```

What did I just do to you with the double set of brackets? We will return to 2d arrays soon.....
You have a list of strings.

```
In [16]: list2[0]='four'  
print (list2)
```

```
['four', 'two', 'three']
```

```
In [17]: list2[2][:]
```

```
Out[17]: 'three'
```

```
In [18]: list2[2][0:2]
```

```
Out[18]: 'th'
```

```
In [19]: list2.upper()
```

```
-----  
AttributeError                                Traceback (most recent call last)  
<ipython-input-19-e42f8e9b472f> in <module>()  
----> 1 list2.upper()
```

```
AttributeError: 'list' object has no attribute 'upper'
```

Why did I get this error?

```
In [19]: type(list2)
```

Out[19]: list

list 2 is a list, not a string. It is a list of strings..... So any one item is a string...

```
In [20]: list2[1].upper()
```

Out[20]: 'TWO'

```
In [21]: list2.sort()
print (list2)
```

['four', 'three', 'two']

See, I just did a list function on the strings in the list.....

Make two string variables that are all lower case of your first and last name.

Write them out.

Combine them into a new string with your whole name with the first letters capitalized.

What else can you do to it?

In []:

In []:

In []: