

FUNCTIONS:

What are functions? Functions allow us to create reusable blocks of code that can be executed repeatedly. Functions also allow us to solve problems.

syntax:

```
def name_function():  
    print('Star')
```

Name_function()

Star

```
In [8]: 1 def name_function():  
        2     print('Star')
```

```
In [10]: 1 name_function()
```

Star

add a docstring with instruction for use at a later date

```
In [13]: 1 def name_function():  
        2     '''  
        3     DOCSTRING: function for last name  
        4     INPUT:  
        5     OUTPUT: LastName  
        6     '''  
        7     print('Gray')
```

```
In [14]: 1 name_function()
```

Gray

```
In [15]: 1 help(name_function)
```

Help on function name_function in module __main__:

```
name_function()  
    DOCSTRING: function for last name  
    INPUT:  
    OUTPUT: LastName
```

```
1 now you can use the help function to provide details about what code is intended to do  
2 very helpful if you're writing code for someone else, or using at a later date
```

Functions allow you to solve problems, for example

```
In [42]: 1 def pig_latin(word):  
2  
3     first_letter = word[0]  
4  
5     #check if vowel  
6     if first_letter in 'aeiou':  
7         pig_word = word + 'ay'  
8     else:  
9         pig_word = word[1:] + first_letter + 'ay'  
10  
11     return pig_word
```

```
In [49]: 1 pig_latin('Hello')
```

```
Out[49]: 'elloHay'
```

```
In [48]: 1 pig_latin('Star')
```

```
Out[48]: 'tarSay'
```

```
In [47]: 1 pig_latin('Arizona')
```

```
Out[47]: 'rizonaAay'
```

```
In [50]: 1 pig_latin('9')
```

```
Out[50]: '9ay'
```