

Functions

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Scope, Namespaces, and Mutable Objects

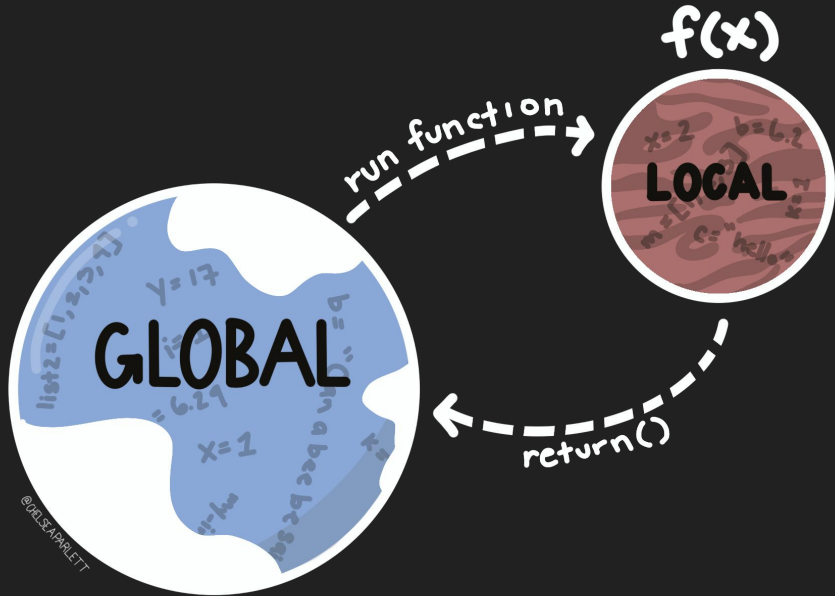
A function sometimes takes arguments as parameters. These parameters are within the local namespace of the function.

This starts off as referencing the same object as your argument, but if you change anything, you get a new object.

```
3  def my_f(x):  
4      print(id(x))  
5      x = 24  
6      print(id(x))  
7  
8  h = 2  
9  print(id(h))  
10 my_f(h)
```

Scope, Namespaces, and Mutable Objects

However, when you change mutable objects, it does not create a new object, it changes an existing one.



```
3  def my_f(x):  
4      print(id(x))  
5      x[0] = 20  
6      print(id(x))  
7  
8  h = [0,1,2,3]  
9  print(id(h))
```

Returning Tuples and Lists

Multiple Assignment

Sometimes functions return multiple items (as a Tuple).