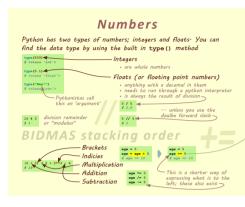
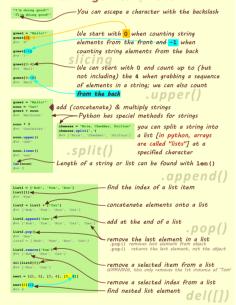


Everything in Python is cosidered to be an object, and objects have attributes and functions; when we talk about these functions with respect to these objects, we call them methods…thus, objects can have attributes and methods.



"Strings" & [Lists]



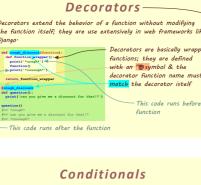
[List] Comprehension

squared_even_numbers = [
num**2 for num in nums if(num**2) % 2 — (

The kind of comprehension method can be used (mutatis mutandis

[List] & (Tuple) Manipulation

Tuples are immutable and lists are mutable; in example: — tuples cannot be appended but lists can be appended





Reference: https://github.com/Richard-Burd/python-3-sandbox

File Importing .python-3-sandbox/test.py

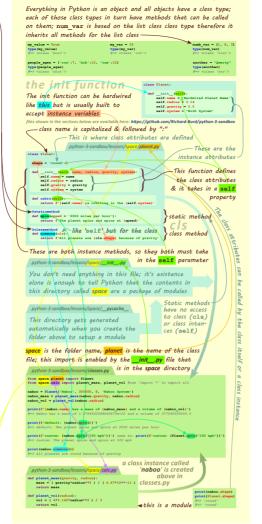


— this keeps the code execution in the while loop when the user enters in "y"

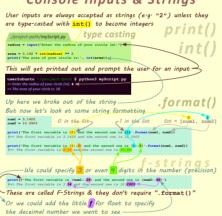
{Dictionary} Comprehension

_	python-3-sandbox/dictionary_comprehension.py		
	dict1 = {'a': 1, 'b': 2, 'c': 3, 'd': 4, 'a': 5} Comprehension Method		
	double_dict = (k:v*2 for (k,v) in dict1.items())		
	double_dict_if_even = {k:v*2 for (k,v) in dict1.items() if v%2 == 0}		
	<pre>dict1_tripleCond = {k:('even' if v12=0 else 'odd') for (k,v) in dict1.items()}</pre>		
	print(double_dict) #+> ('a': 2, 'b': 4, 'a': 6, 'd': 8, 'e': 10) Double each value in the dictionary		
	Double each value in the dictionary		
	only if the value is an even number		
	<pre>print(dict1 tripleCond) #=> ('a': 'odd', 'b': 'even', 'c': 'odd', 'd': 'even', 'e': 'odd')</pre>		
	Identify odd and even entries		
	mested dict = ('first':('a':1), 'second':('b':2))		
1	nested dict = ('first'('a'i), 'second'('b'i2)) float dict = ('first''('a'i), 'second''('b'i2))		
ı	<pre>couter k: (flost(inner v) for (inner k, inner v) in outer v.items())</pre>		
ı	for (outer k, outer v) in nested dict.items()		
ı)		
ı	print(float_dict)		
1	#-> ('first': (1.0), 'second': (2.0))		
ľ	<pre>people_dictionary = {'member_01':{'age':20, 'name':"Sal'}, 'member_02':{'age':23, 'name':"Ton"}}</pre>		
1	people names = {		

Classes, Modules, & Packages



Console Inputs & Strings



Ranges

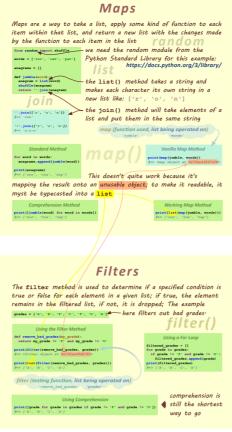
In Python, ranges generate a list of numbers for us that we can then use to iterate over in for loops for a in range(5):

this will go up to but not including 5 go through but not include 10 for n in range(20,300, 80).

print(n)

\$-> 20 \$-> 100 \$-> 180 \$-> this will **start** from and include 20 and go through but not <mark>includ</mark> 300 in intervals of 80 len() this len() method times one length of the names list and some length of th





Collections - Deque

x.rotate(2) print(x) #>> deque(('6', '1', '2', '3

you can only add to the deque with the extend() method, but that will still mantain the original maxlen of 5

{Sets} [Lists] & Sorting

with capital letters

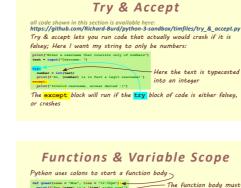
keys values

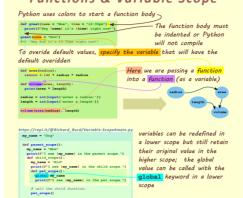
all code shown in this section is available here. Mapset/glithub.com/Richard Burd/glython-3-sandbau/setu.p Python lists are similiar to JavaScript & Ruby arrays whereas Python sets are essentially Python dictionaries with only keys, and no values: Every element in a set must be immutable but the set set and thus, remove duplicates in a list of strings, but it will not

this -1 is the last item in the list and the start position, this -1 is the position right before the start of the list because this value tells us the looping and point and it is an up-to-but-not-included value, finally, this -2 is the increment amount, and it is negative

Dictionary Iteration







Advanced Overview Features

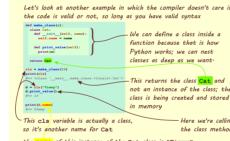
global

https://ghthub.com/kichard-Burd/python-3-sandbox/kinfiles/expert.py
Python is compiled into bytecode before it is interpreted
Compilers take high-level code and translate it into a lower-levelAn interpreter takes some kind of code, in our case bytecode, and
interprete & runs that code: This is unique to Python because it
is a compiled language, here we have a class with an undefined

" compiled language, here we have a class with an undefined

'bark' method:

class Dog:
det _init_(sail):
det _init_(sail):
language, here we have a class with an undefined Inguage, here we have a class with an undefined 'bark' method that has not yet been defined; If I run the code at this point there will be no errors. In other languages, the compiler would detect this error and tell you to define what 'bark' is, but here, this bit of code is executed at runtime instead of compile time. All the compiler does for us is translate the Python into bytecode, and it does not always check to see if the code is actually valid. Thus, the error above is said to be 'only caught at runtime' and not at compile time.



the name of this instance of the Cat class is "Timmy" range, but it is aware of the existence of show() inside a deeper scope it is not a part of, but show() must be declared on a line ABOVE wherever it is being called or it will not run and will generate an 'is not defined' error

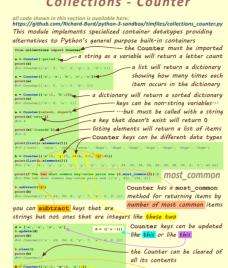


Zip Function

Collections

The Python data types above must be imported via their commensurate module in order to be used to show the property of the commensurate module in order to be used to provide the property of the property of the provided	Standard Python Containers 1.) list 2.) set 3.) dictionary (dict) 4.) tuple — this one is immutab python-3-sandbox/test.py	5.) defaultDict
	a - Constar('qallad') print(a) d - depart(a': 2, '2': 2, 'g': 2, 'd': 2)) d - depar('halle') print(d) f-> depar('halle') print(d) f-> depar('l'a', 'a', '2', '2', 'a')) print - cassidad('pain', 'a', '2', 'a')) print - cassidad('pain', 'a', 'a', 'a') print(a', 'a', 'a', 'a', 'a', 'a'))	The Python data types above must be imported via their commensurate module in order to

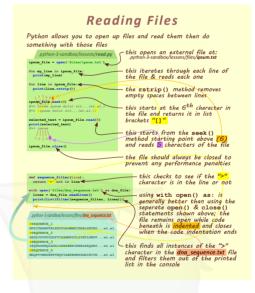
Collections - Counter



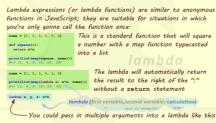
When you subtract element on a counter, it will not show values of 0 or negative values

Here we say that b is "intersecting" with a and this gives the lowest common values for the items in the counter, in this case, z has a value of 3 (in Counter a above) and a value of 10 (in Counter b above) so since 3 is the smallest, that is the intersect value intersection & union of Counters

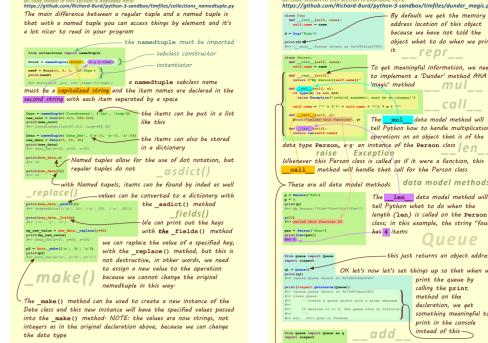
The opposite of intersecting is called "union" (x & y) which is shown here: These are the maximum values between the two Counters a and b above $(x \mid y)$

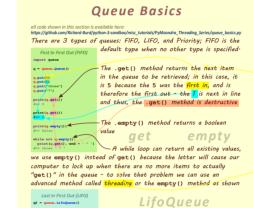


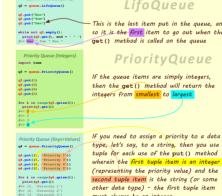
Lambdas



Collections - NamedTuple







Writing Files



Downloading Files

and this statement gets printed out

Threading

importing of the threading module

Dunder Magic

____ By default we get the memory

length (len) is called on the Person class; in this example, the string "four"

Queue

__sub_



Python 3 Tutorial for Beginners by The Net Ninja

Python Programming Tutorials by Tech With Tim https://www.youtube.com/playlist?list=PLzMcBGfZo4-mFu00qxl0a67RhjjZj3jXm

ntermediate Python Tutorials by Tech With Tim https://www.youtube.com/playlist?list=PLzMcBGfZo4-nhWva-60Vh1yKWHBs4o_tv

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Mastering Python by Tech With Tim

Python Tutorials : Threading Beginners by PyMoondra https://www.youtube.com/watch?v=bnm5_GH04fM

github.com/Richard-Burd/python-3-sandbox

last updated @ 6:37pm on 04/May/2021 by Richard Burd rick.a.burd@gmail.com

Python Illustrated