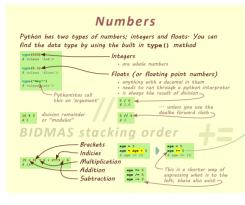
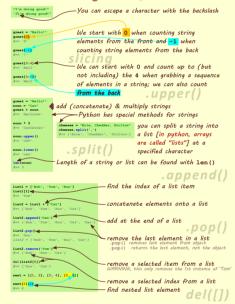


Everything in Python is cosidered to be an object, and objects have attributes and functions; when we talk about these functions with respect to these objects, we call them methods…thus, objects can have attributes and methods.



"Strings" & [Lists]



[List] Comprehension

Standard Method

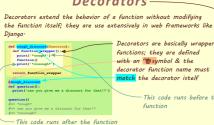
squared_even_numbers = [
num**2 for num in nums if(num**2) % 2 — (

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

Decorators —



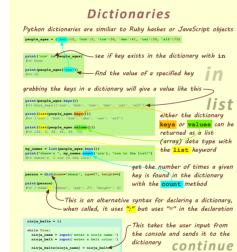
Conditionals



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

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

To import relative from the top level directory, use dot notation

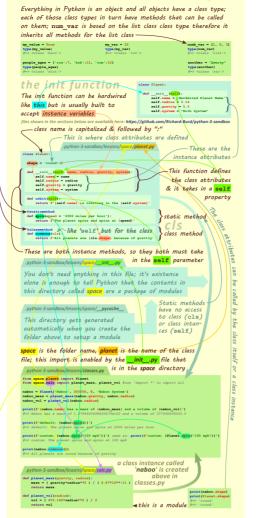


this keeps the code execution in the while loop when the user enters in "Y"

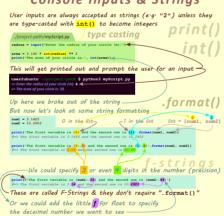
{Dictionary} Comprehension substitute for loops and lambda functions: However, not all for loops can be written as a dictionary comprehension but all dictionary comprehensions can be written with a for loop.

ir_k: ((inner_v)
or (inner_k, inner_v) in outer_v.items() if inner_k == 'name')
for (outer_k, outer_v) in people_dictionary.items()

Classes, Modules, & Packages



Console Inputs & Strings



Ranges

then use to iterate over in for loops for a in range(5):

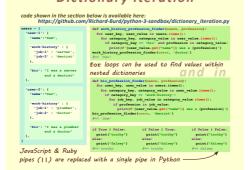
this will go up to but not including 5 go through but not include 10 for n in range(20,300, 80).

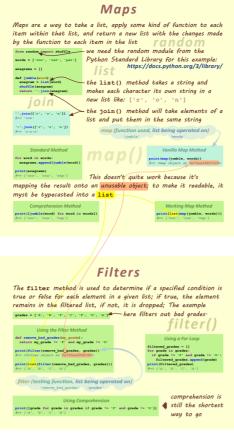
print(n)

\$-> 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

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-include value, finally, this -2 is the increment amount, and it is negative

Dictionary Iteration





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

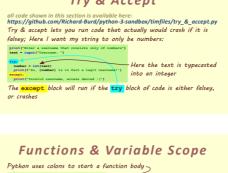
{Sets} [Lists] & Sorting

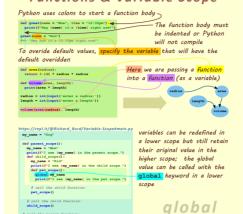
with capital letters





Trv & Accept





Advanced Overview Features

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:

| This is unique to Python because it is a compiled language, here we have a class with an undefined language, 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.

main make class clocalso cat's This returns the class Cat and class is being created and stored in memory This cls variable is actually a class,

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

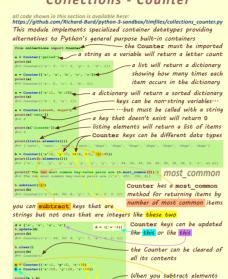
Everything in Python is an object so each thing has its own unique memor address The inspect module can show us some pretty cool things because of the fact that all of our Python objects are live; here we use the gestsource() method to get the sourcecode of a specific method, function, class, or other object

Zip Function

Collections

Standard Python Containers	Collections Module Containers
1.) list	1.) counter
2.) set	2.) deque
3.) dictionary (dict)	3.) namedTuple
4.) tuple ← this one is immut	able 4.) OrderedDict
.python-3-sandbax/test.py	5.) defaultDict
from collections import Counter, deque, named a = Counter('gallad') print(a) \$\infty \cdot \text{Counter(('a': 2, '1': 2, 'g': 1, 'd': 1))}}	tupls, orderedDict
d = deque("hello")	The Python data types above
print(d) #-> deque(['h', 'e', 'l', 'l', 'o'])	must be imported via their
Point = namedtuple('Point', 'x y z time')	commensurate module in order to
newP = Point(3, 4, 5, '12:00pm') print(newP)	be used as shown on the left

Collections - Counter



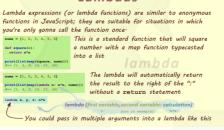
Here we say that b is "intersecting" with a and this gives the lowest common values for the items in the counter, in this case, z has a value of 3 (in Counter a above) and a value of 10 (in Counter b above) so since 3 is the smallest, that is the intersect value intersection & union of Counters The opposite of intersecting is called "union" (x & y) which is shown here: These are the maximum values between the two Counters a and b above $(x \mid y)$

on a counter, it will not show values of 0 or negative values

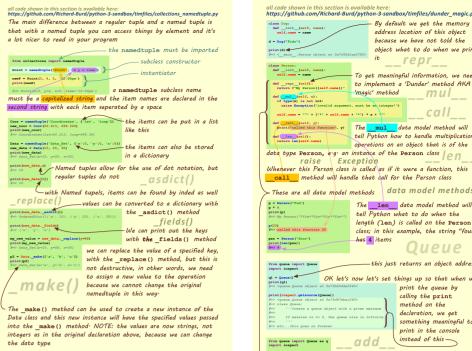
Reading Files

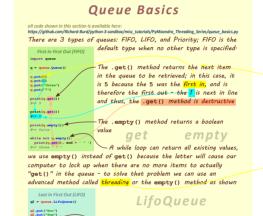


Lambdas



Collections - NamedTuple







Writing Files



Downloading Files

and this statement gets printed out

Threading

importing of the threading module

Dunder Magic

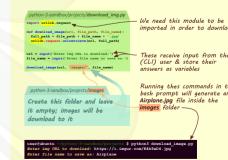
____ By default we get the memory

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

Oueue

calling the print
method on the
declaration, we get
something meaningful t

__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

Expert Python Tutorials by Tech With Tim https://www.youtube.com/playlist?list=PLzMcBGfZo4-kwmlcMDdXSuy_wSqtU-xDP

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