*Python Functions Study Sheet Last Update 5 Jul ‘23*

general syntax: def myFcn(args):

‘‘‘

*docstring here*

’’’

#fcn body here

#return here

what’s a docstring? a block comment; first line should summarize what the function does; then other useful info such as params, returns, exceptions, other important information

what do functions that don’t return anything return? the None object

creating a function stub: write defn, then write pass in the body

*write a function header with...*

...argument default values def myFcn(arg1 = 5)

...arbitrary (number of) arguments def myFcn(\*args) #args is now a tuple

...keyword arguments def myFcn(\*\*kwargs) #kwargs is a dict

can then call, say, kwargs[‘f’] inside fcn if ‘f’ is a key in kwargs

calling a function with kwargs: myFcn(a = “cat”, b = “dog”)

*consider myList = [1, 2, 3, 4]*

*consider square(num) that squares a number*

*consider prod(num1, num2) that multiplies two numbers together*

what do the following return?

map(square, myList): [1, 4, 9, 16] <-- a map object that can be re-listed

accumulate(prod, myList): [1, 2, 6, 24]

reduce(prod, myList): 24

rewrite the map above with a lambda function in place of “square”:

map(lambda x : x \*\* 2, myList)

filter out odd numbers only from myList using another lambda function:

filter(lambda x : x % 2 != 0, myList) <-- reminder: creates filter object