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In [1]:  # Map Function

         def square(num):
             return num**2

In [2]:  my_nums = [1,2,3,4,5]

In [5]:  for item in map(square,my_nums):
             print(item)

         1
         4
         9
         16
         25

In [6]:  def splicer(mystring):
             if len(mystring)%2 ==0:
                 return 'EVEN'
             else:
                 return mystring[0]

In [7]:  names = ['andy','eve','sally']

In [9]:  list(map(splicer,names))

Out[9]:  ['EVEN', 'e', 's']

In [10]: # Filter Function

         def check_even(num):
             return num%2 == 0

In [11]: mynums = [1,2,3,4,5,6]

In [13]: list(filter(check_even,mynums))

Out[13]: [2, 4, 6]

In [14]: for n in filter(check_even,mynums):
             print(n)

         2
         4
         6

In [15]: def square(num):
             result = num**2
             return result

In [16]: square(3)

Out[16]: 9

In [17]: def square(num): return num ** 2

In [18]: square(3)

Out[18]: 9

In [19]: # lambda Expressions

         square = lambda num: num ** 2

In [20]: square(5)

Out[20]: 25

In [22]: list(map(lambda num:num**2,mynums))

Out[22]: [1, 4, 9, 16, 25, 36]

In [24]: list(filter(lambda num:num%2==0,mynums))

Out[24]: [2, 4, 6]

In [25]: names

Out[25]: ['andy', 'eve', 'sally']

In [26]: list(map(lambda name:name[0],names))

Out[26]: ['a', 'e', 's']

In [27]: list(map(lambda x:x[0],names))

Out[27]: ['a', 'e', 's']

In [28]: list(map(lambda name:name[::-1],names))

Out[28]: ['ydna', 'eve', 'yllas']

In [ ]:
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