Lamda,map,filter

**Lambda:**

A lambda function is a small anonymous function.

A lambda function can take any number of arguments but can only have one expression.

Syntax

lambda *arguments*: *expression*

Example

* **Regular way for writing function**

def square(x):

return x \* x

* **lambda function**

square\_lambda = lambda x: x \* x

**Map:**

function executes a specified function for each item in an iterable. The item is sent to the function as a parameter.

Syntax

map(function, iterables)

Example

* **map with Regular function**

def myfunc(a, b):  
  return a + b  
  
x = map(myfunc, ('apple', 'banana', 'cherry'), ('orange', 'lemon', 'pineapple'))

* **map with lambda**

numbers = [1, 2, 3, 4, 5]

squared = map(lambda x: x \* x, numbers)

Output: [1, 4, 9, 16, 25]

**Filter:**

function returns an iterator where the items are filtered through a function to test if the item is accepted or not.

Syntax

filter(function, iterable)

Example

ages = [5, 12, 17, 18, 24, 32]  
  
def myFunc(x):  
  if x < 18:  
    return False  
  else:  
    return True  
  
adults = filter(myFunc, ages)  
  
for x in adults:  
  print(x)