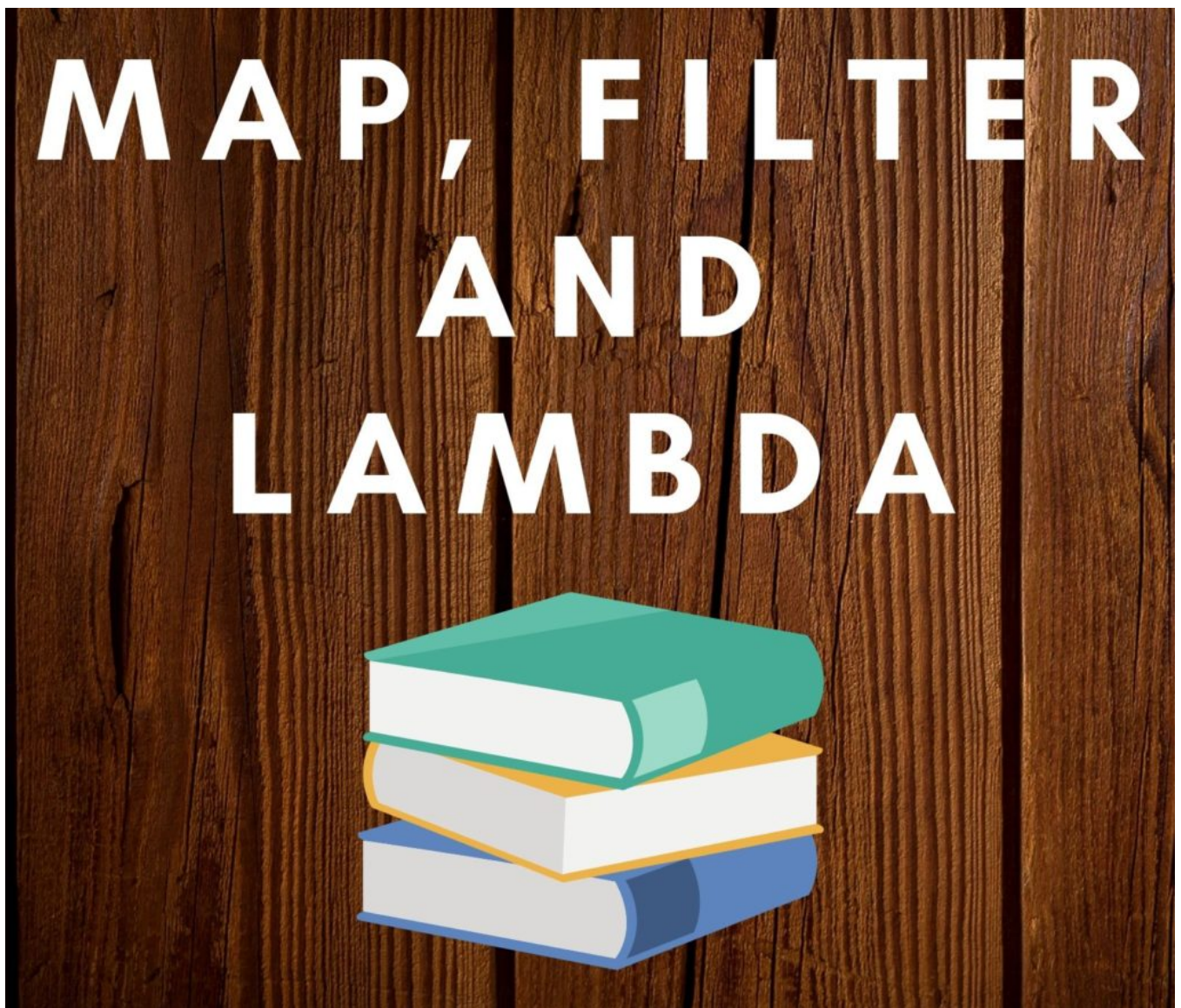




# Map, Filter, and Lambda in Python-Complete Tutorial

Python / March 27, 2020



This **Map, Filter, and Lambda in Python-Complete Tutorial** is made for you. At the end of this tutorial, you will have full knowledge of the **Map, Filter, and Lambda in Python**.

Hello, & Welcome!

## Part 17- Map, Filter, and Lambda in Python-Complete Tutorial

In this article of Python Tutorial, you will learn following-

1. Map in Python.
2. Filter in Python.
3. Lambda in Python

### Map in Python.

A `map()` function is a way to make a list, apply some kind of function on each data item within a list. And to change the item and create a new list without updating items within it.

Syntax of a `map()` function-

```
map(function,data)
```

Here, a **function** performs some operation. And **data** is a list that we want to update.

Let's understand with the help of an example-

Here, in the example, we have to jumble or shuffle the words.

```
from random import shuffle
def jumble(word):
    anagram=list(word)
    shuffle(anagram)
    return "".join(anagram)
words=["Beetroot", "Carrots", "Potatoes"]
anagram=[]
print(list(map(jumble,words)))
```

Here, in **“from random import shuffle”** shuffle is a by-default package.

In **“print(list(map(jumble,words)))”**, a list typecasts into a list. A **jumble** is a function. And **words** is data or list.

## Filter in Python.

A **Filter()** method is an easy way to take a collection or list and filter some values based on function result and this gives a new filter collection.

Syntax of **Filter()** method-

```
filter(function,list)
```

Suppose there is a grade list, consist of different grades-

```
grades=['A','B','F','C','F','A']
```

but inside this list, we don't want to show less grade, so to remove less grade we need to filter the list.

For example from `grades=['A', 'B', 'F', 'C', 'F', 'A']` we want to remove 'F' grade, so for this task, we need to create a function which removes 'F'.

```
grades=['A','B','F','C','F','A']
def remove_fails(grade):
    return grade != 'F'
print(list(filter(remove_fails,grades)))
```

OUTPUT-

```
['A','B','C','A']
```

Here, in **“print(list(filter(remove\_fails, grades)))”** a list typecasts into the list. **“remove\_fails”** is a function which removes 'F' and **grades** is a list in which we wanna apply filter.

## Lambda in Python-

A lambda in python is an anonymous function, which means it doesn't require any names. It is used when there is a need of function which is used only once, so at that time, you can use lambda. A Lambda is used once.

Syntax of Lambda function-

```
lambda arguments : statements
```

A lambda function can take more than one number of arguments.

Suppose, you want to square numbers in a list, then you can use a lambda function for this task.

Let's understand with the help of an example-

```
nums=[1,2,3,4,5,6]
print(list(map(lambda n:n*n,nums)))
```

OUTPUT -

```
[1,4,9,16,25,36]
```

Here, a lambda function is used, which performs a square operation.

That's all for the **Map, Filter, and Lambda in Python**. I hope now you have a better understanding of the **Map, Filter, and Lambda in Python**.

Congratulations! You successfully learned the **Map, Filter, and Lambda in Python**.



In the next tutorial, we will start learning **Decorators in Python**.

Till then, Enjoy Learning Python!

All the Best!

Are you ML Beginner and confused, from where to start ML, then read my BLOG – [How do I learn Machine Learning?](#)

If you are looking for Machine Learning Algorithms, then read my Blog – [Top 5 Machine Learning Algorithm.](#)

If you are wondering about Machine Learning, read this Blog- [What is Machine Learning?](#)

Thank YOU!

## Though of the Day...

*“Live as if you were to die tomorrow. Learn as if you were to live forever.”*

*– Mahatma Gandhi*

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