

## Lambda Function:

A lambda function is a small anonymous function. It can take any number of arguments, but can only have one expression.

```
x = lambda a : a + 10
print(x(5))
# Output: 15
```

## Map:

The `map()` function is used to apply a function to each item of an iterable (list, tuple etc.) and returns a new list containing all the items modified by the function

```
pythonCopy code
def multiply(x):
    return x * 2

numbers = [1, 2, 3, 4]
result = list(map(multiply, numbers))
print(result)
# Output: [2, 4, 6, 8]
```

## Reduce:

The `reduce()` function is used to apply a particular function passed in its argument to all of the list elements. This function is defined in the `functools` module.

```
pythonCopy code
from functools import reduce

def multiply(x, y):
    return x * y

numbers = [1, 2, 3, 4]
result = reduce(multiply, numbers)
print(result)
# Output: 24
```

## Filter:

The `filter()` function is used to filter the given iterable with the help of another function passed as an argument to test all the elements to be `True` or `False`.

```
def even_check(num):
    if num % 2 == 0:
        return True

numbers = [1, 2, 3, 4, 5, 6]
result = list(filter(even_check, numbers))
print(result)
# Output: [2, 4, 6]
```