

# Python - Filter Function

The `filter()` function calls the specified function which returns boolean for each item of the specified iterable (list).

**filter() Signature:**

`filter(function, iterable) --> filter object`

The `filter()` function also receives two arguments, a function and a sequence (e.g. a list). Each item in the list is processed by the function which returns True or False. Only those items which return True are stored in a filter object. This can then be conveniently converted into a sequence.

Look at the following function `isPrime()` which returns True if the parameter is a prime number, otherwise it returns False. This function is used inside `filter()` along with a range object producing numbers between 2 and 10. Only prime numbers are collected in the resulting list object.

```
def isPrime(x):
    for n in range(2,x):
        if x%n==0:
            return False
        else:
            return True

fltrObj=filter(isPrime, range(10))
print ('Prime numbers between 1-10:', list(fltrObj))
```

**Result:**

Prime numbers between 1-10: [3, 5, 7]

The lambda function can also be used as a filter. The following program returns a list of even numbers from a range.

**Example: Filter with Lambda Expression**

```
fltrObj=filter(lambda x: x%2==0, range(10))
print(list(fltrObj))
```