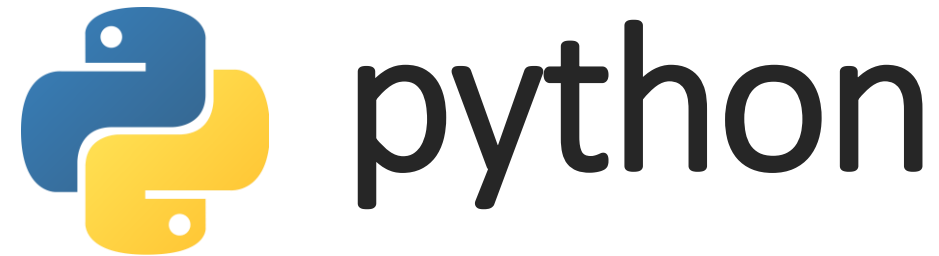




Dipartimento di
Ingegneria Elettrica Elettronica
e Informatica

Advanced Programming Languages



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Advanced Programming Languages



Miscellaneous

[HTTPS://SEABORN.PYDATA.ORG/EXAMPLES/INDEX.HTML](https://seaborn.pydata.org/examples/index.html)

Advanced Programming Languages



Filter – Map – Reduce

[HTTPS://DOCS.PYTHON.ORG/3/LIBRARY/FUNCTIONS.HTML](https://docs.python.org/3/library/functions.html)
[HTTPS://DOCS.PYTHON.ORG/3/LIBRARY/FUNCTOOLS.HTML](https://docs.python.org/3/library/functools.html)

Filter

filter(function, iterable)

- Construct an *iterator* from those elements of *iterable* for which *function* returns *True*
- *iterable* may be either a sequence, a container which supports iteration, or an iterator
- If *function* is *None*, the identity function is assumed, that is, all elements of *iterable* that are false are removed

Map

map(function, iterable, ...)

- Return an *iterator* that applies *function* to every item of *iterable*, yielding the results
- If additional *iterable* arguments are passed, function must take that many arguments and is applied to the items from all *iterables* in parallel
- With multiple *iterables*, the iterator stops when the shortest *iterable* is exhausted



Reduce

functools.reduce(function, iterable[, initializer])

- Apply ***function*** of two arguments **cumulatively** to the items of *iterable*, from left to right, to reduce the *iterable* to a single value
- If the optional *initializer* is present, it is placed before the items of the *iterable* in the calculation and serves as a default when the *iterable* is empty
- If *initializer* is not given and *iterable* contains only one item, the first item is returned



Example