



# Python 3.1 Quick Reference

available at <http://pedrokruger.net/python-quick-reference/>

## Built-in functions

```
abs(x)
all(iter)
any(iter)
ascii(obj)
bin(x)
bool([x])
bytearray([arg, [encoding, [errors]]])
bytes([arg, [encoding, [errors]]])
chr(i)
classmethod(fn)
compile(source, filename, mode)
complex(real, [imag])
dict([arg])
dir([object])
divmod(x, y)
enumerate(iter, start=0)
eval(source, [globals, [locals]])
filter(fn, iter)
float([x])
format(alue, [format_spec])
frozenset([iter])
getattr(object, name, [default])
globals()
hasattr(object, name)
hash(object)
help([object])
hex(x)
id(object)
input([prompt])
int([number | string, [base]])
isinstance(object, classinfo)
issubclass(class, classinfo)
iter(object, sentinel)
len(object)
list([iter])
```

```
locals()
map(func, iter, ...)
max(iter, [args...], *, [key])
memoryview(obj)
min(iter, [args...], *, [key])
next(iterator, [default])
object()
oct(number)
open(file, **keys)
ord(c)
pow(x, y, [z])
print([obj, ..., sep, end, file])
property(**keys)
range([start,] stop, [step])
repr(object)
reversed(sequence)
round(x, [n])
set(iter)
setattr(object, name, value)
slice([start], stop, [step])
sorted(iter, [key], [reverse])
staticmethod(unction)
str([object, [encoding, [errors]]])
sum(iterable, [start])
super([type, [object-or-type]])
tuple([iter])
type(object)
type(name, bases, dict)
vars([object])
zip(*iters)
```

## Built-in constants

```
False, True, None
Ellipsis, NotImplemented
```

## Boolean operations

```
not x
x or y
x and y
```

## Comparisons

```
x < y
x <= y
x > y
x >= y
x == y
x != y
x is y
x is not y
x < y < z
```

## Numeric operations

```
x + y    sum
x - y    subtraction
x * y    multiplication
x / y    quotient
x // y   floored quotient
x % y    remainder
-x       negation
+x       identity
x ** y   x to the power y
```

## Bit-string Operations

```
x | y    or
x & y    and
x ^ y    exclusive or
x << n   bitwise left-shift
x >> n   right-shift
~x       bitwise invert (integers)
```

## Extended Assignment

```
x += y    x /= y
x &= y    x >= y
x -= y    x %= y
x |= y    x <= y
x *= y    x **= y
x ^= y    x //= y
```

## Sequence Assignment

```
w = [1, 2, 3, 4]
a, *b = w      (1, [2, 3, 4])
a, *b, c = w   (1, [2, 3], 4)
```

## Sequence Operations

x in s	membership
x not in s	membership
s + t	concatenation
s * n, n * s	copy s n times
s[n]	nth item of s
s[i:j]	from i to j
s[i:j:k]	from i to j, step k

## Slice examples

```
s = ['a', 'b', 'c']
s[0]    'a'      first
s[-1]   'c'      last
s[1:]   ['b', 'c'] rest
s[:-1]  ['a', 'b'] butlast
```

## Float methods

```
float.as_integer_ratio()
float.hex()
float.fromhex(s)
```

## List methods

```
append(obj)
extend(iter)
count(value)
index(value, [start, [stop]])
insert(pos, obj)
pop([index])
remove(value)
reverse()
sort(key=None, reverse=False)
```

## String methods

```
capitalize()
center(width, [fillchar])
count(sub, [start, [end]])
decode([encoding, [errors]])
encode([encoding, [errors]])
endswith(suffix, [start, [end]])
expandtabs([tabsize])
find(sub, [start, [end]])
format(*args, **kwargs)
index(sub, [start, [end]])
isalnum()
isalpha()
isdigit()
islower()
isspace()
istitle()
isupper()
join(iterable)
ljust(width, [fillchar])
lower()
lstrip([chars])
partition(sep)
replace(old, new, [count])
rfind(sub [,start [,end]])
rindex(sub, [start, [end]])
rjust(width, [fillchar])
rpartition(sep)
rsplit([sep [,maxsplit]])
rstrip([chars])
```

```
split([sep, [maxsplit]])
splitlines([keepends])
startswith(prefix, [start, [end]])
strip([chars])
swapcase()
title()
translate(table, [deletechars])
upper()
zfill(width)
```

## Set methods

```
add(elem)
clear()
copy()
difference(other, ...)
difference_update(other, ...)
discard(elem)
intersection(other, ...)
intersection_update(other, ...)
isdisjoint(other)
issubset(other)
issuperset(other)
pop()
remove(elem)
symmetric_difference(other)
symmetric_difference_update(other)
union(other, ...)
update(other, ...)
```

## Dictionary methods

```
clear()
copy()
fromkeys(seq, [value])
get(key, [default])
items()
keys()
popitem()
pop(key, [default])
setdefault(key, [default])
update([other])
values()
```

## File methods

```
close()
flush()
fileno()
isatty()
next()
read([size])
readline([size])
readlines([sizehint])
xreadlines()
seek(offset, [whence])
tell()
truncate([size])
write(str)
writelines(sequence)
```

## From future (python 2.6)

```
from __future__ import <f>
absolute_import PEP 328
division PEP 238
print_function PEP 3105
unicode_literals PEP 3112
```

## Keywords (keyword.kwlist)

False None True and as assert  
break class continue def del in  
elif else except finally for is  
from global if import lambda  
nonlocal not or pass raise  
return try while with yield

## Built-in exceptions

```
BaseException
├── SystemExit
├── KeyboardInterrupt
├── GeneratorExit
├── Exception
└── StopIteration
```

```
BaseException
├── AssertionError
├── AttributeError
├── BufferError
├── ArithmeticError
│   ├── FloatingPointError
│   ├── OverflowError
│   └── ZeroDivisionError
├── EnvironmentError
│   ├── IOError
│   ├── OSError
│   ├── WindowsError (Windows)
│   └── VMSError (VMS)
├── EOFError
├── ImportError
├── LookupError
│   ├── IndexError
│   └── KeyError
├── MemoryError
├── NameError
│   └── UnboundLocalError
├── ReferenceError
├── RuntimeError
│   └── NotImplementedError
├── SyntaxError
│   ├── IndentationError
│   └── TabError
├── SystemError
├── TypeError
├── ValueError
│   ├── UnicodeError
│   ├── UnicodeDecodeError
│   ├── UnicodeEncodeError
│   └── UnicodeTranslateError
├── Warning
├── DeprecationWarning
├── PendingDeprecationWarning
├── RuntimeWarning
├── SyntaxWarning
├── UserWarning
├── FutureWarning
├── ImportWarning
├── UnicodeWarning
└── BytesWarning
```