

Python Reference Guide

Version 1.2



Main data types

boolean = True / False
integer = 10
float = 10.01
string = "123abc"
list = [value1, value2, ...]

Numeric Operators

+ addition
- subtraction
***** multiplication
/ division
****** exponent
% modulus
// floor division

Boolean Operators

and logical AND
or logical OR
not logical NOT

Comparison Operators

== equal
!= not equal
> higher
< lower
>= higher or equal
<= lower or equal

Special characters

comment
\n new line
\t tab
\<char> escape char

Assignment operators

= simple assignment **x=y**
+= increment assignment **x+=y**
-= decrement assignment **x-=y**
***=** multiplication assignment **x*=y**
%= remainder assignment **x%=y**
/= division assignment **x/=y**
//= floor division assignment **x//=y**

String operations

string[i] retrieves character at position i
string[-1] retrieves last character
string[i:j] retrieves characters in range i to j

String methods

string.upper() returns uppercase string
string.lower() returns lowercase string
string.count(x) counts how many times x appears
string.find(x) position of the first occurrence of x
string.replace(x,y) replaces x with y
string.islower() returns True if all characters are lowercase
string.isupper() returns True if all characters are uppercase
string.isalnum() returns True if all characters are alphanumeric
string.isalpha() returns True if all characters are alphabetic
string.isdigit() returns True if all characters are digits
string.index(s) returns index of substring s in string
string.strip(x) returns a string with leading and trailing characters removed

List operations

list = [] defines an empty list
list[i] = x stores x with index i
list[i] retrieves the item with index i
list[-i] retrieves last i item from list
list[i:j] retrieves items in the range i to j
list[i:] retrieves items from i to the end
del list[i] removes the item with index i

List methods

list.append(x) appends x to the end of the list
list.extend(L) appends L to the end of the list
list.insert(i,x) inserts x at i position
list.remove(x) removes the first list item whose value is x
list.pop(i) removes the item at position i and returns its value
list.clear() removes all items from the list
list.index(x) returns the position of the first occurrence of x in a list
list.count(x) returns the number of times x appears in a list
list.sort() sorts items in a list
sorted(L) returns a new list with L items sorted
list.reverse() reverses list elements
list.copy() returns a copy of the list

Legend: x, y = any data values; s = string; n = number; L = List

Built-in functions		Conditional statements	Reading and writing files
print(x, sep='y')	prints x objects separated by y	if <condition> : <code>	f = open(<path>,'r')
input(s)	prints s and waits for an input that will be returned	elif <condition> : <code>	f.read(<size>)
len(x)	returns the length of x (s or L)	...	f.readline(<size>)
min(L)	returns the minimum value in L	else: <code>	f.close()
max(L)	returns the maximum value in L		f = open(<path>,'r')
sum(L)	returns the sum of the values in L		for line in f: <code>
range(n1,n2,n)	returns a sequence of numbers from n1 to n2 in steps of n	if <value> in <list>:	f.close()
abs(n)	returns the absolute value of n	Loops	f = open(<path>,'w')
round(n1,n)	returns the n1 number rounded to n digits	while <condition>: <code>	f.write(<str>)
type(x)	returns the type of x (string, float, list ...)	for <variable> in <list>: <code>	f.close()
str(x)	converts x to a string	for <variable> in range (start,stop,step): <code>	Functions
list(x)	converts x to a list		def function(<params>): <code>
int(x)	converts x to an integer		return <data> or none
float(x)	converts x to a float	Loop control statements	Modules
bool(x)	converts x to a Boolean value	break finishes loop execution	import module
pow(n1,n2)	returns n1 to the power of n2	continue jumps to next iteration	module.function()
chr(x)	returns the string value of a Unicode code	pass does nothing	from module import * function()
ord(x)	returns the Unicode code of a single-character string		
map(function, L)	applies function to values in L		

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