Cheatography

# Python Functions Cheat Sheet

by KilGrave via cheatography.com/69386/cs/17507/

## Math Module Functions

| | |
|---|---|
| ceil(x) | Returns the smallest integer greater than or equal to x |
| copysign(x, y) | Returns x with the sign of y |
| fabs(x) | Returns the absolute value of x |
| factorial(x) | Returns the factorial of x |
| floor(x) | Returns the largest integer less than or equal to x |
| fmod(x, y) | Returns the remainder when x is divided by y |
| isfinite(x) | Returns True if x is neither an infinity nor a NaN (Not a Number) |
| isinf(x) | Returns True if x is a positive or negative infinity |
| isnan(x) | Returns True if x is a NaN |
| ldexp(x, i) | Returns x *(2*i)* |
| modf(x) | Returns the fractional and integer parts of x |
| exp(x) | Returns e**x |
| expm1(x) | Returns e**x – 1 |
| log(x[, base]) | Returns the logarithm of x to the base (defaults to e) |
| log2(x) | Returns the base-2 logarithm of x |
| log10(x) | Returns the base-10 logarithm of x |
| pow(x, y) | Returns x raised to the power y |
| sqrt(x) | Returns the square root of x |
| acos(x) | Returns the arc cosine of x |
| asin(x) | Returns the arc sine of x |
| atan(x) | Returns the arc tangent of x |
| atan2(y, x) | Returns atan(y / x) |
| cos(x) | Returns the cosine of x |
| hypot(x, y) | Returns the Euclidean norm, sqrt(*xx* + *yy*) |
| sin(x) | Returns the sine of x |
| tan(x) | Returns the tangent of x |
| degrees(x) | Converts angle x from radians to degrees |
| radians(x) | Converts angle x from degrees to radians |
| gamma(x) | Returns the Gamma function at x |
| lgamma(x) | Returns the natural logarithm of the absolute value of the Gamma function at x |
| pi | Mathematical constant, the ratio of circumference of a circle to it's diameter (3.14159...) |

## Math Module Functions (cont)

| | |
|---|---|
| e | mathematical constant e (2.71828...) |

*** import math and use math.fun()**

## Sets Functions

| | |
|---|---|
| S.add(e) | Adds the element **e** to the set **S** |
| S1.update(S2) | Adds the items specified in the set **S2** to the set **S1** |
| S.remove(e) | Remove the element **e** from the set **S** |
| S.pop() | Removes any element from the set **S** |
| S.clear() | Remove all element from the set **S** |
| S.copy() | Creates a copy of the set **S** |
| S1.union(S2) | Returns a set containing elements from both **S1** and **S2** |
| S1.intersection(S2) | Returns a set containing elements common in set **S1** and **S2** |
| S1.difference(S2) | Returns a set containing elements in set **S1** but not in **S2** |
| S1.symmetric_difference(S2) | Returns a set containing elements which are in one of the either sets **S1** and **S2**, but not in both |

## String Functions

| | |
|---|---|
| S.count(str) | Counts the number of times string **str** occurs in string **S** |
| S.find(str) | Returns index of first occurrence of string **str** in string **S**, and **-1** if **str** is not present int string **S** |
| S.rfind(str) | Returns index of last occurrence of string **str** in string **S**, and **-1** if **str** is not present in string **S** |
| S.capitalize() | Returns a string that has first letter of the string **S** in uppercase and rest of the characters in lowercase |
| S.title() | Returns a string that has first letter of every word in the string **S** in uppercase and rest of the characters in lowercase |
| S.lower() | Returns a string that has all uppercase characters in string **S** converted into lowercase characters |

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## String Functions (cont)

| | |
|---|---|
| S.upper() | Returns a string that has all lower characters in string **S** converted into uppercase characters |
| S.swapcase() | Returns a string that has all lowercase characters in string **S** converted into uppercase characters and vice versa |
| S.isupper() | Returns **True** if all alphabets in string **S** are in uppercase,else **False** |
| S.islower() | Returns **True** if all alphabets in string **S** are in lowercase,else **False** |
| S.istitle() | Returns **True** if string **S** is in titlecase |
| S.replace(str1,str2) | Returns a string that has every occurrence of string **str1** in **S** replaced by with the occurrence of string **str2** |
| S.strip() | Returns a string that has whitespaces in **S** removed from start and end |
| S.lstrip() | Returns a string that has whitespaces in **S** removed from start |
| S.rstrip() | Returns a string that has whitespaces in **S** removed from end |
| S.split(delimeter) | Returns a list formed by splitting the string **S** into various substring. The delimeter is used to mark the split points |
| S.partition(delimeter)- | Partitions the string **S** into two parts base on **delimeter** and returns a tuple comprising of string before **delimeter** |
| S.join(sequence) | Returns a string comprising of elements of the sequence separated by delimeter **S** |
| S.isspace() | Returns **True** if all characters in string **S** comprise of whitespace characters only,i.e. **' '**, **'\n'**, **'\t'** else **False** |
| S.isalpha() | Returns **True** if all characters in string **S** comprise of alphabets only, else **False** |

## String Functions (cont)

| | |
|---|---|
| S.isdigit() | Returns **True** if all characters in string **S** comprise of digits only, else **False** |
| S.isalnum() | Returns **True** if all characters in string **S** comprise of alphabets and digits only, else **False** |
| S.startswith(str) | Returns **True** if string **S** starts with string **str**,else **False** |
| S.endswith(str) | Returns **True** if string **S** ends with string **str**,else **False** |
| S.encode(str) | Returns **S** in encoded format according to the given encoding scheme |
| S.decode(str) | Returns the decoded string **S** according to the given encoding scheme |

## List

| | |
|---|---|
| L.append(e) | Adds the element **e** to the end of the list **L** |
| L.extend(L2) | Adds the items specified in the list **L2** at the end of the list **L** |
| L.remove(e) | Remove the element **e** from the list **L** |
| L.pop(i) | Removes the element specified at index **i** ***from the list*** *L** |
| L.count(e) | Returns count of occurrence of element **e** in list **L** |
| L.index(e) | Returns index of element **e** from list **L** |
| L.insert(i,e) | Returns element **e** at the index **i** in list **L** |
| L.sort() | Sorts the elements of the list **L** |
| L.reverse() | Reverses the order elements in list **L** |

## File Handling

| | |
|---|---|
| open(filename,mode) | Open a **file** and store it as an object |
| file.close() | Close a file which is opened |
| file.read() | Read whole data from **file** |
| file.readline() | Read a line from **file** |
| file.readlines() | Read all the lines in a list from **file** |
| file.write('data') | Write data in a file |

*** Mode can be 'r', 'w' and 'a'**

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