

Python Cheat Sheet: Functions and Tricks

| | | Description | Example | Result |
|--------------------|---------------------------|---|--|---|
| ADVANCED FUNCTIONS | map(func, iter) | Executes the function on all elements of the iterable | list(map(lambda x: x[0], ['red', 'green', 'blue'])) | ['r', 'g', 'b'] |
| | map(func, i1, ..., ik) | Executes the function on all k elements of the k iterables | list(map(lambda x, y: str(x) + ' ' + y + 's', [0, 2, 2], ['apple', 'orange', 'banana'])) | ['0 apples', '2 oranges', '2 bananas'] |
| | string.join(iter) | Concatenates iterable elements separated by string | 'marries '.join(list(['Alice', 'Bob'])) | 'Alice marries Bob' |
| | filter(func, iterable) | Filters out elements in iterable for which function returns False (or 0) | list(filter(lambda x: True if x>17 else False, [1, 15, 17, 18])) | [18] |
| | string.strip() | Removes leading and trailing whitespaces of string | print("\n\t42\t".strip()) | 42 |
| | sorted(iter) | Sorts iterable in ascending order | sorted([8, 3, 2, 42, 5]) | [2, 3, 5, 8, 42] |
| | sorted(iter, key=key) | Sorts according to the key function in ascending order | sorted([8, 3, 2, 42, 5], key=lambda x: 0 if x==42 else x) | [42, 2, 3, 5, 8] |
| | help(func) | Returns documentation of func | help(str.upper()) | '... to uppercase.' |
| | zip(i1, i2, ...) | Groups the i-th elements of iterators i1, i2, ... together | list(zip(['Alice', 'Anna'], ['Bob', 'Jon', 'Frank'])) | [('Alice', 'Bob'), ('Anna', 'Jon')] |
| TRICKS | Unzip | Equal to: 1) unpack the zipped list, 2) zip the result | list(zip(*(['Alice', 'Bob'], ('Anna', 'Jon')))) | [('Alice', 'Anna'), ('Bob', 'Jon')] |
| | enumerate(iter) | Assigns a counter value to each element of the iterable | list(enumerate(['Alice', 'Bob', 'Jon'])) | [(0, 'Alice'), (1, 'Bob'), (2, 'Jon')] |
| | python -m http.server <P> | Want to share files between PC and phone? Run this command in PC's shell. <P> is any port number 0–65535. Type <IP address of PC>:<P> in the phone's browser. You can now browse the files in the PC directory. | | |
| | Read comic | import antigravity | Open the comic series xkcd in your web browser | |
| | Zen of Python | import this | '...Beautiful is better than ugly. Explicit is ...' | |
| | Swapping numbers | Swapping variables is a breeze in Python. No offense, Java! | a, b = 'Jane', 'Alice' a, b = b, a | a = 'Alice' b = 'Jane' |
| | Unpacking arguments | Use a sequence as function arguments via asterisk operator *. Use a dictionary (key, value) via double asterisk operator ** | def f(x, y, z): return x + y * z f(*[1, 3, 4]) f(**{'z': 4, 'x': 1, 'y': 3}) | 13 13 |
| | Extended Unpacking | Use unpacking for multiple assignment feature in Python | a, *b = [1, 2, 3, 4, 5] | a = 1 b = [2, 3, 4, 5] |
| | Merge two dictionaries | Use unpacking to merge two dictionaries into a single one | x={'Alice': 18} y={'Bob': 27, 'Ann': 22} z = {**x,**y} | z = {'Alice': 18, 'Bob': 27, 'Ann': 22} |