

CUCaTS Python Cheatsheet

Datatype	Example
Integers	5
Floats	9.6
Booleans	True and False
Strings	"Hello world!"
Lists	[4, 8, 15, 16, 23, 42] ["first", "second"] [[], "some text", 99]
Dictionaries	{"Alice": 42, "Bob": 40}

Operations

+, -, *, /, % (on integers or floats)
+ (to join strings or lists)
==, != (comparing any values)
>, >=, <, <= (comparing integers or floats)
and, or, not (on booleans)

Lists and Strings

Element access	list[index]
Slicing	list[start:end]
Length	len(____)
Comprehensions	[__ for __ in __] [__ for __ in __ if __]

Variables

Labels onto values. Names must consist only of letters, digits and underscores. Cannot start with a digit or have spaces. They are case sensitive.

Loops

```
for __ in __:
```

```
while __:
```

```
break
```

```
continue
```

Branches

```
if __:
```

```
elif __:
```

```
else:
```

Functions

```
def __(__):
```

```
return __
```

Exceptions

```
try:
```

```
except __:
```

```
finally:
```

```
raise __
```

Common functions and methods

```
range(end)
```

```
range(start, end)
```

```
range(start, end, step)
```

```
enumerate(list)
```

```
zip(list, otherlist)
```

```
list(iterable)
```

```
str(value)
```

```
int(value)
```

```
list.append(item)
```

```
list.reverse()
```

```
list.remove(item)
```

```
string.split(separator)
```

```
string.capitalize()
```

```
string.upper()
```

```
string.lower()
```

```
string.find(substring)
```

```
dict.keys()
```

```
dict.update(otherdict)
```

Files

Opening and reading the whole file:

```
with open("input.txt") as file:  
    print(file.read())
```

Line by line:

```
with open("input.txt") as file:  
    for line in file:  
        print(line)
```

Writing:

```
with open("input.txt", "w") as file:  
    file.write(str(somelist))
```

with automatically closes the file at the end of the block. Manually closing instead:

```
file = open("input.txt"):  
[...]  
file.close()
```