

# Cheat sheet: Python basics (#1)

## Scalar immutable data types

**float** 0.1, 3.9E-12  
**complex** 3.0 + 1.2j  
**int** 3, -2, ...  
**bool** True, False  
**string** "string", """Multiline string"""

## Arithmetic operators

+ - \* / usual arithmetic operators  
//, % integer division, remainder  
\*\* power

## Relational operators

==, !=, <, <=, >, >=

## Assignment

= (Aliasing!)

## String indexing

**str[pos], str[lower:upper:incr]**

0-based indexing

lower – incl., upper – excl.

Def.: lower=0, upper=len(str), incr=1

**String concatenation** *str1 + str2*

**String repetition** *str \* 3*

## Type conversion

**int(), float(), complex(), str()**

**Read user input** **input("Prompt:")**

## String formatting

**f"{expr:form}"**

**"{:form}".format(expr)**

# Cheat sheet: Python basics (#2)

## Format specifiers

**:Wd** Integer number  
**:W.Pf** Float point, fixed notation  
**:W.PE** Float, exponential notation  
**:W.PG** :f or :e depending on value  
**:Ws** string  
*W* width, *P* precision

## Branching

```
if Condition1:  
    Code1  
elif Cond2:  
    Code2  
...  
else:  
    DefaultCode
```

## Loops

```
for loopvar in iterable:  
    loop code  
else:  
    executed if all items in iterable  
    consumed  
  
while condition:  
    loop code  
else:  
    executed if condition became False  
  
continue Back to loop header and  
            reevaluate / consume next  
break Leave loop
```