

# Python Language & Syntax Cheat Sheet

Rule #1: Python is white-space dependent; code blocks are indented using spaces.

Rule #2: Python language is case sensitive. It matters for variables, functions and any keyword in general.

## Variable Assignment

```
myInteger = 1
myString = "Hello World"
myList = [ "John", "James", "Laura" ]
playerName = input ( "What's your name?" )
```

## Basic Arithmetics

```
i = a + b
i = a - b
i = a / b
i = a * b
i = a % b (Modulus/Remainder)
```

## Adding Comments / Annotations

# Single Line Comment

```
"""
```

Multi-line comment

```
"""
```

## Conversions

#To convert from a numeric type to a string:

```
str(100)
```

#To convert from a string to an integer:

```
int("100")
```

#To convert from a string to a float:

```
float("100.5")
```

#e.g

```
myAge= int ( input( "What's Your Age" ) )
```

## String Manipulation

```
myString="Hello " + "world"
```

#The following code would return a list as follows:

```
# ["John","James","Laura"]
myString="John,James,Laura"
myString.split(",")
```

#The following code would remove spaces at the beginning and end of a string

```
myString=" Hello "
print( myString.strip() ) # this would display "Hello"
```

## Functions

**Warning: Use the 4 spaces rule!!! (Indentation)**

```
def myFunction ( arg1, arg2,... ) :
    #Code goes here
    return myValue
```

#e.g.

```
def mySumFunction ( x, y, z=0 ) :
    sum = x + y + z
    return sum
```

```
print ( mySumFunction ( 1,3,5 ) ) # this would display 9
```

## IF Statements

**Warning: Use the 4 spaces rule!!! (Indentation)**

```
if i == 7:
    print "seven"
else:
    print "Not seven!"
```

```
if i == 7:
    print "seven"
elif i == 8:
    print "eight"
elif i == 9:
    print "nine"
else:
    print "Not seven, eight or nine"
```

## Loops

**Warning: Use the 4 spaces rule!!! (Indentation)**

```
for i in range(1,10): #using a range
    print i
```

```
for i in [1, 3, 5, 7]: #using a list
    print i
```

```
i=0
while i<=100:
    print i
```

#When using a loop, if you want to exit the loop you can use the following instruction:

```
break
```

## Comparison Operators & Conditions

#These operators can be used in **If Statements** or with **While loops**. They return **True** or **False**!

a == b	Is a equal to b?
a != b	Is a different from b?
a < b	Is a lower than b?
a > b	Is a greater than b?
a <= b	Is a lower or equal to b?
a >= b	Is a greater or equal to b?
a is None	Is a null/none?
a is not None	Is a not null/none?
a in ["John","James","Luke"]	Is a one of the value in the given list?
myString.startswith("Hello")	Does myString start with the string "Hello"?
"@" in myEmail	Does the string myEmail contains the string "@"?

## Importing Modules

# Imports should be made at the top of your code: #e.g.

```
import random
```