

## **Python Basics**

**Operation** 

Example

#### Variables

You can name a variable anything as long as it obeys the following rules:

1. It can be only one word.

It can use only letters, numbers, and the underscore (\_) character.
 It can't begin with a number.
 Variable name starting

with an underscore (\_) are considered as "unuseful`.

Example:

spam = 'Hello'
spam = 'Hello'

#### Comments

	-	-
**	Exponent	2 ** 3 = 8
%	Modulus/Remainder	22 % 8 = 6
//	Integer division	22 // 8 = 2
/	Division	22 / 8 = 2.75
*	Multiplication	3 * 3 = 9
-	Subtraction	5 - 2 = 3
+	Addition	2 + 2 = 4

# Inline comment: # This is a comment Multiline comment: # This is a # multiline comment Code with a comment: a = 1 # initialization Please note the two spaces in front of the comment. Function docstring: def foo(): """ This is a function docstring You can also use: "''' Function Docstring '''

Math Operators

**Operators** 

#### Data types

Data Type Examples		/ the ogramme san Union
Integers	-2, -1, 0, 1, 2, 3, 4, 5	unded by mus+ Pr e Europe
Floating-point numbers	-1.25, -1.0,0.5, 0.0, 0.5, 1.0, 1.25	Co-f Eras of th
Strings	'a', 'aa', 'aaa', 'Hello!', 'W0rld'	

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#### Conditions

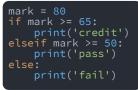
One block:

if x == 3: print('x is 3')

Two blocks:

mark = 80
if mark >= 50:
 print('pass')
else:
 print('fail')

Multiple blocks:



#### Range

Counts from 0 to 9: range(10) Starts from 0 and goes up to, not including 10 Counts from 1 to 10: range(1, 11) Counts from 10 to 1: range(10, 0, -1) Counts in steps of 2:

range(0, 11, 2)

Counts down in steps of 2:

range(10, 0, -2)



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## **Python Basics**

Loops	Comparison		
· ·	Equal to:		
While:	x == 3:		
x = 0 while x < 4:			
print(x)	Not equal to:		
x = x + 1	× != 3:		
Exiting a loop	Less than:		
using break:	x < 3:		
x = 0 while x < 4:	Greater than:		
print(x)	x > 3:		
if x == 2: break	Less than or		
x = x + 1	equal to:		
Restart the loop	x <= 3:		
using continue:	Greater than		
x = 0	or equal to:		
while x <= 10:	x >= 3:		
if x % 2 == 0: continue			
print('%s is odd' % x)	The result of		
For:	a comparison		
for i in range(10):	is a boolean:		
print(i)			
Iterates over string:	True		
for c in 'Hello':	or		
print(c)	False		
Input and output			
Print message:			
<pre>print('Hello world!')</pre>			
Print multiple values:			
<pre>ndays = 365 print('There are', ndays, 'in a year')</pre>			
Ask user for a string:			
<pre>name= input('What is your name? ')</pre>			
Ask user for a whole number:			
<pre>num = int(input('Enter a number)</pre>	: '))		

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