>>> introduction to Python

"Los programadores del mañana son los magos del futuro. Programar es crear algo completamente nuevo desde cero."

Mark Zuckerberg, fundador de Facebook

python

What is programming?

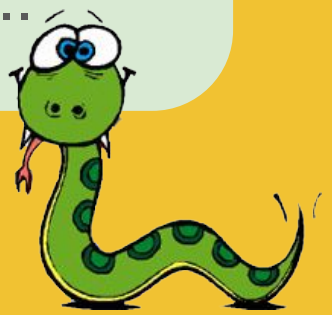
https://www.youtube.com/watch?v=7vbi-OCFZEY

python

What is Python?

High-level, open, multiplatform programming language.
Simple grammar and easy to learn!

Used in **web programming**, **mobile**, **server**, **scientific computing**, **maths, artificial intelligence**...



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Monty Python

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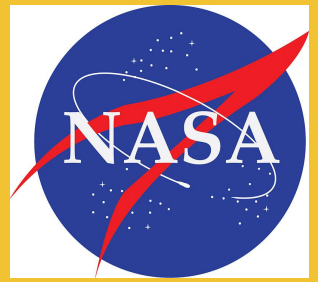
Companies that use Python



>>> introduction to Python

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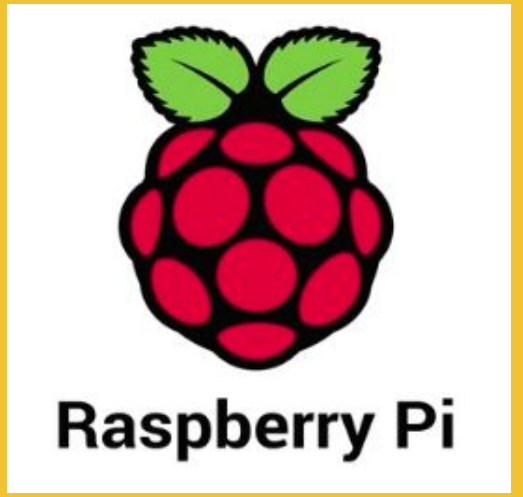
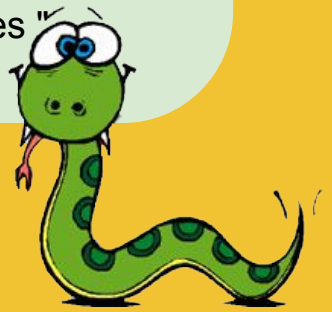


>>> introduction to Python

```
#Programa per calcular el major numero
num1 = 18
num2 = 14
num3 = 12

if (num1 >= num2) and (num1 >= num3):
   mayor = num1
elif (num2 >= num1) and (num2 >= num3):
   mayor = num2
else:
   mayor = num3

print ("El mayor numero entre " + str(num1) + ", " + str(num2) + " y " + str(num3) + " es "
+ str(mayor))
```



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To start

We need an **interpreter** to run **scripts**
Editor vs **console**

In console: type **python3**
>>>

https://codeanywhere.com

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Data types

string = “hola” *(cadena de caracteres)*
integer = 3 *(entero)*
float = 2.51 *(decimal)*
boolean = True/False *(booleano)*

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Strings & Simple operations

```
print (“hello world!)
print(2 + 2)

#Comment in one single line
```

*Strings and integers are **built-in types***

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Errors

Read them!

SyntaxError *(something misspelled)*
NameError *(undefined/unknown variable)*
IndexError *(when accessing lists)*

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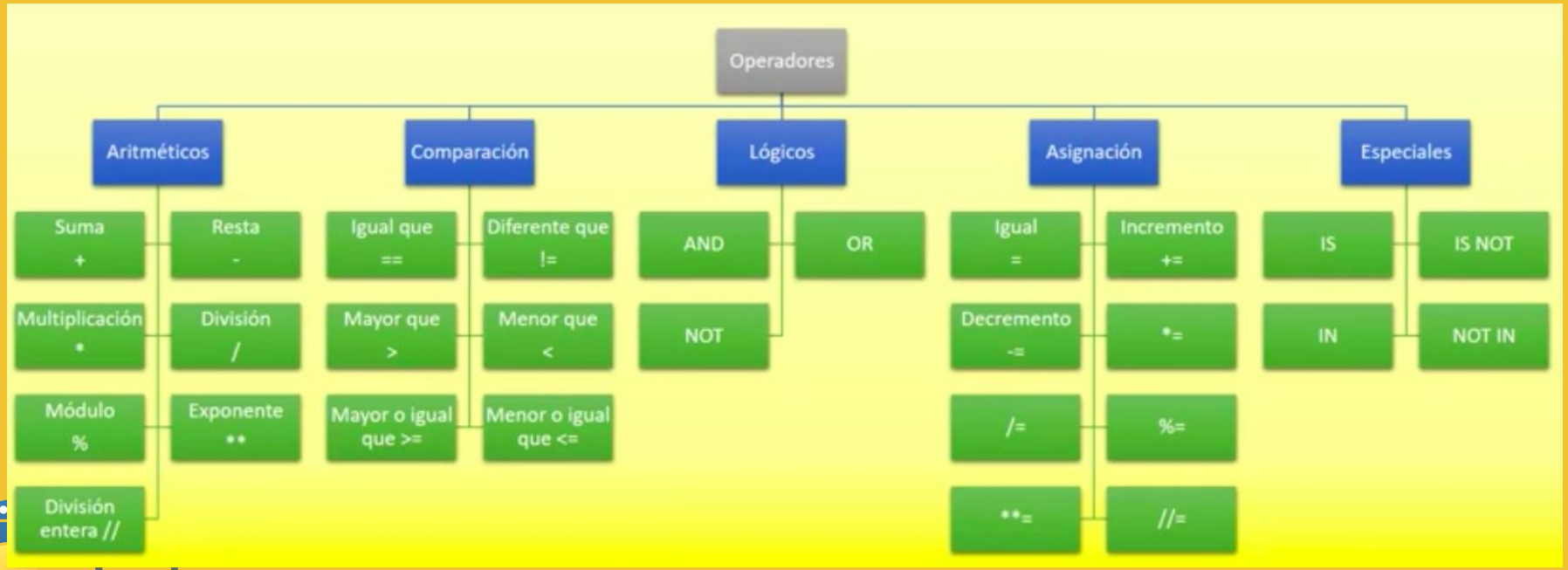
Python operators



Math simple operations

Suma = 5 + 2
Resta = 80 - 29
Multiplicación = 33 * 2
División = 40 / 3
Modulo (resto división) = 3 % 2
Potencia = 2 ** 5

Exercise: restaurant bill

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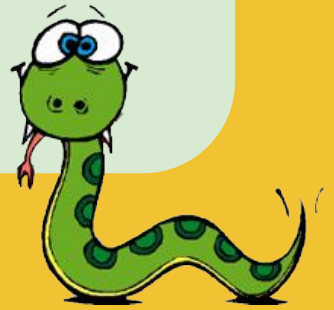
Variables

To create formulas to use with different values

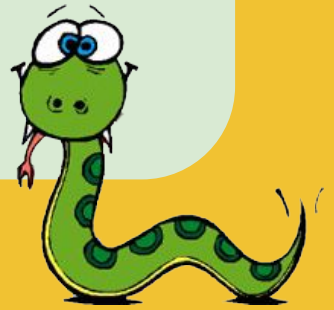
```
side = 2
area = side * side
print (area)
```



Variables: name rules

this_is_a_normal_name = 7
this_also2 = 7

DON’T USE: spaces, -, number at the beginning, strange characters,
Ex: 2-this, mi variable, mi-variable



Variables: change value

```
x = 7
print(x)
 x = “yuhu”
print(x)   (the last value)
```

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Strings

```
nombre = "Aina"
edad = "35"
comida = "brownie"
```

‘My name\’s “Aina” and I\’m a programmer’

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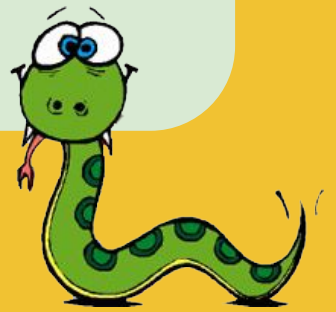
Strings

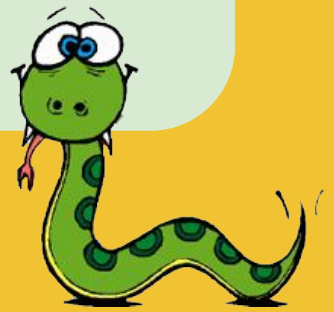
```
message = “””Message
in three
lines”””

print (message)
```



Strings & Simple operations

primera_letra = “AINA”[0]

“hello” + “world”
‘hello’ * 3
‘My name is “Aina”’



String methods

len(“hola”)	*longitud*
HOLA**.lower()**	*minúsculas*
hola.**upper()**	*mayúsculas*
str(2)	*convertir nº a String*
x = "J123"; x.**isalpha**()	*¿solo caracteres?*

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String concatenate

```
print("Despa" + 'cito')
print(“2” + “2”)
```

Error! print (“7” + 8) *Son tipos diferentes*

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String formatting

Combine a String with variables

```
nombre = “Alberto”
print “Hola” %s” % (nombre)
```

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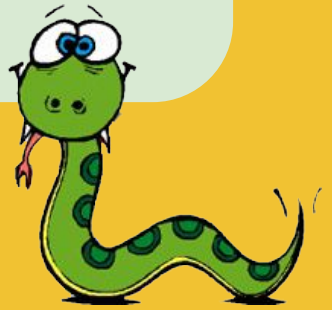
Strings

‘My name is “Aina” and I\’m a programmer’
\n = newline

print("""Hello,
How are you?""")



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What does this code do?

```
len(str(304023))
```

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Conditional operators

Equal to (**==**) = *es para asignar!*

Not equal to (**!=**)

Less than (**<**)

Less than or equal to (**<=**)

Greater than (**>**)

Greater than or equal to (**>=**)

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>>> print (“learning python”);

Boolean operators

AND

A	B	A AND B
True	True	True
True	False	False
False	True	False
False	False	False

OR

A	B	A OR B
True	True	True
True	False	True
False	True	True
False	False	False

NOT

A	NOT A
True	False
False	True

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