Lecture 1b Basic Python : Boolean Truth Values

Boolean data type is named after the mathematician George Boole.

The Boolean data type has only two values :
`True` **and** `False`

Do Not Write
true, false,
"True" or "False" !!!

Comparison Operators

Operator	Meaning
= =	Equal to
! =	Not equal to
<	Less than
>	Greater than
< =	Less than or equal to
> =	Greater than or equal to

The Difference Between The == And = Operators

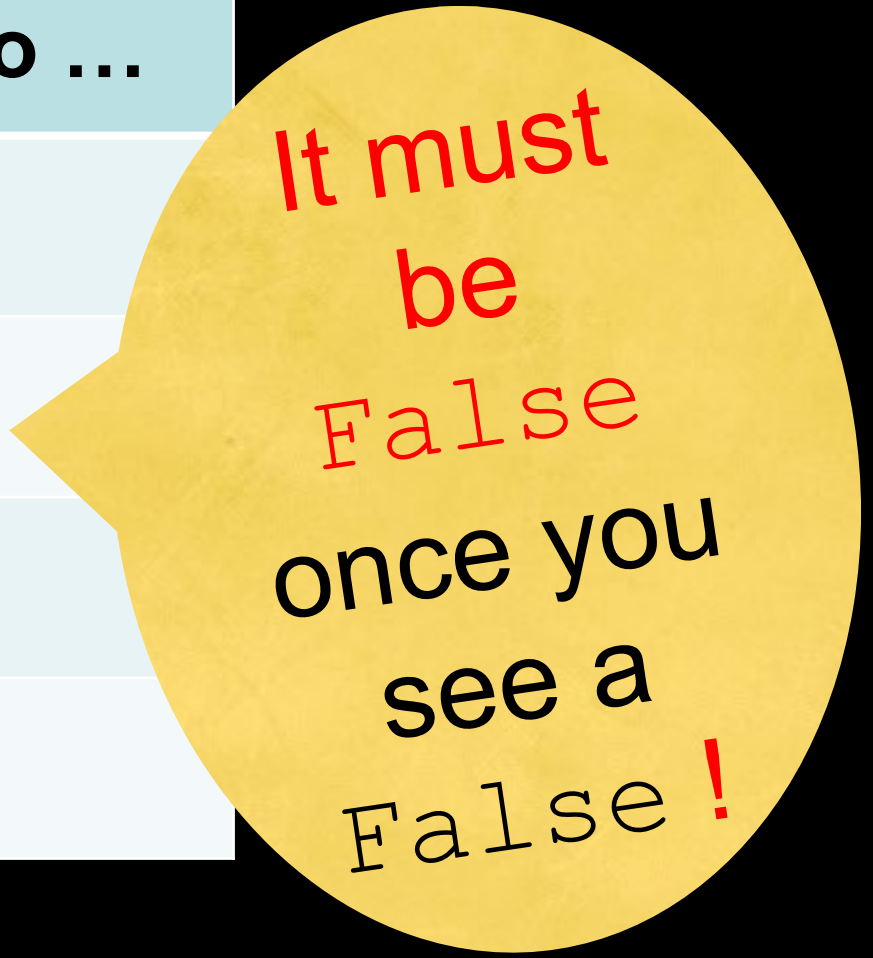
Operator	Meaning
==	(equal to) : asks whether two values are the same as each other.
=	(assignment) : puts the value on the right into the variables on the left. `eg.  distance = 5`

Boolean Operators

Operator	Meaning
`and`	The `and` operator evaluates an expression to be `True` if both the two Boolean values are `True`.
`or`	The `or` operator evaluates an expression to be `True` if either of the two Boolean values is `True`.
`not`	The `not` operator simply evaluates to the opposite of the Boolean value. `eg. not True` is `False`

The `and` Operator's Truth Table

Expression	Evaluates to …
`True and True`	`True`
`True and False`	`False`
`False and True`	`False`
`False and False`	`False`



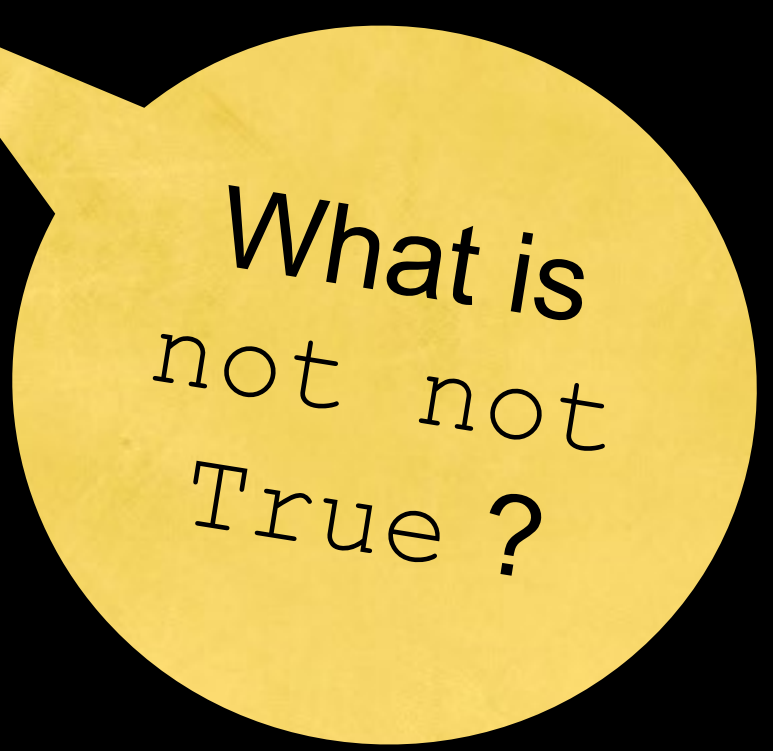
The `or` Operator's Truth Table

Expression	Evaluates to …
`True or True`	`True`
`True or False`	`True`
`False or True`	`True`
`False or False`	`False`

It must be `True` once you see a `True`!

The `not` Operator's Truth Table

Expression	Evaluates to …
`not True`	`False`
`not False`	`True`



More about Boolean Truth Value

In Python 3.x `True` and `False` will always be equal to `1` and `0`

Anything that is `not 0` or `not empty` will also be evaluated as `True`