

## // WHAT IS BOOL

```
is_valid = True
is_banned = False
type(is_valid) # <class "bool">
Only two values. Always capitalized.
print(int(True)) # 1
print(int(False)) # 0
```

## // and - both must be true

```
True and True # True
True and False # False
False and True # False
False and False # False
ALL conditions must be True
```

## // not - flips the value

```
not True # False
not False # True
is_banned = False
not is_banned # True
Avoid not not - rethink the logic instead
```

## // COMBINING CONDITIONS

```
age = 20 | has_id = True
is_banned = False
age > 18 and has_id # True
age > 18 and not is_banned # True
age < 18 or has_id # True
```

## // COMPARISON OPERATORS

```
10 == 10 # True - equal to
10 != 9 # True - not equal to
10 > 5 # True - greater than
10 < 5 # False - less than
10 >= 10 # True - greater or equal
10 <= 9 # False - less or equal
```

Comparison operators always return a bool

## // or - at least one must be true

```
True or True # True
True or False # True
False or True # True
False or False # False
```

ANY condition can be True

## // in and not in

```
name = "RedHornDev"
"Horn" in name # True
"horn" in name # False
"Horn" not in name # False
"bull" in name.lower() # True
in is case sensitive - normalize first
```

## // COMMON MISTAKES

```
! true/false -> True/False - always capitalized
! = assigns, == compares - never confuse them
! print(is_valid == True) -> print(is_valid)
! and = ALL true. or = ANY true
! not not -> rethink the logic
! in is case sensitive - normalize first
```