

3/4 Comparison Operators

- -> comparison operators in Python
- -> comparing operators with a boolean value
- -> he is in the project ipynb file, with a table of operators
- -> **zooming into this table and working through each of them**
 - -> == <- a boolean which asks, "is this equal to this?"
 - -> != <- if they are not equal, then the condition is True
 - -> <> <- this is the same as the previous one
 - -> >, < <- greater than and less than
 - -> is a greater than b, or a less than b?
 - -> numerical values
 - -> >=, <= <- these are the same as the previous operands but with equals signs involved

- -> **comparison operators**
 - -> he is giving examples of these different operators
 - -> he is working his way through the operators in the table
 - -> there are more common ways of doing this
 - -> it's asking, for example, "is two greater than four" - rather than telling it this, it's asking a question as to if it is or not
 - -> when you see examples of these in the code and you are reading through them
 - -> reading through the table
 - -> the comparison operators

Booleans

For the following quiz questions, we will get a preview of comparison operators:

Operator	Description	Example
==	If the values of two operands are equal, then the condition becomes true.	(a == b) is not true.
!=	If values of two operands are not equal, then condition becomes true.	
<>	If values of two operands are not equal, then condition becomes true.	(a <> b) is true. This is similar to != operator.
>	If the value of left operand is greater than the value of right operand, then condition becomes true.	(a > b) is not true.
<	If the value of left operand is less than the value of right operand, then condition becomes true.	(a < b) is true.
>=	If the value of left operand is greater than or equal to the value of right operand, then condition becomes true.	(a >= b) is not true.
<=	If the value of left operand is less than or equal to the value of right operand, then condition becomes true.	(a <= b) is true.

What will be the resulting Boolean of the following pieces of code (answer fist then check by typing it in!)

```
In [66]: # Answer before running cell
2 > 3
```

Out[66]: False

```
In [67]: # Answer before running cell
3 <= 2
```

Out[67]: False

```
In [68]: # Answer before running cell
3 == 2.0
```

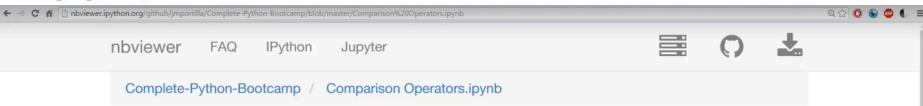
Out[68]: False

```
In [69]: # Answer before running cell
3.0 == 3
```

Out[69]: True

```
In [70]: # Answer before running cell
4*0.5 != 2
```

Out[70]: False



Comparison Operators

In this lecture we will be learning about Comparison Operators in Python. These operators will allow us to compare variables and output a Boolean value (True or False).

If you have any sort of background in Math, these operators should be very straight forward.

First we'll present a table of the comparison operators and then work through some examples:

Table of Comparison Operators

Operator	Description	Example
==	If the values of two operands are equal, then the condition becomes true.	(a == b) is not true.
!=	If values of two operands are not equal, then condition becomes true.	(a != b) is true

<>	If values of two operands are not equal, then condition becomes true.	(a <> b) is true. This is similar to != operator.
>	If the value of left operand is greater than the value of right operand, then condition becomes true.	(a > b) is not true.
<	If the value of left operand is less than the value of right operand, then condition becomes true.	(a < b) is true.
>=	If the value of left operand is greater than or equal to the value of right operand, then condition becomes true.	(a >= b) is not true.
<=	If the value of left operand is less than or equal to the value of right operand, then condition becomes true.	(a <= b) is true.

Let's now work through quick examples of each of these.