

PYTHON FUNDAMENTALS

Data Structures

There are a number of built in python data structures that you will use all the time when programming. You can find a table of them available below:

Data Structure	Ordered	Mutable	Constructor	Example
int	NA	NA	<code>int()</code>	5
float	NA	NA	<code>float()</code>	6.5
string	Yes	No	<code>' '</code> or <code>" "</code> or <code>str()</code>	"this is a string"
bool	NA	NA	NA	<code>True</code> or <code>False</code>
list	Yes	Yes	<code>[]</code> or <code>list()</code>	[5, 'yes', 5.7]
tuple	Yes	No	<code>()</code> or <code>tuple()</code>	(5, 'yes', 5.7)
set	No	Yes	<code>{ }</code> or <code>set()</code>	{5, 'yes', 5.7}
dictionary	No	Keys: No	<code>{ }</code> or <code>dict()</code>	{'Jun':75, 'Jul':89}

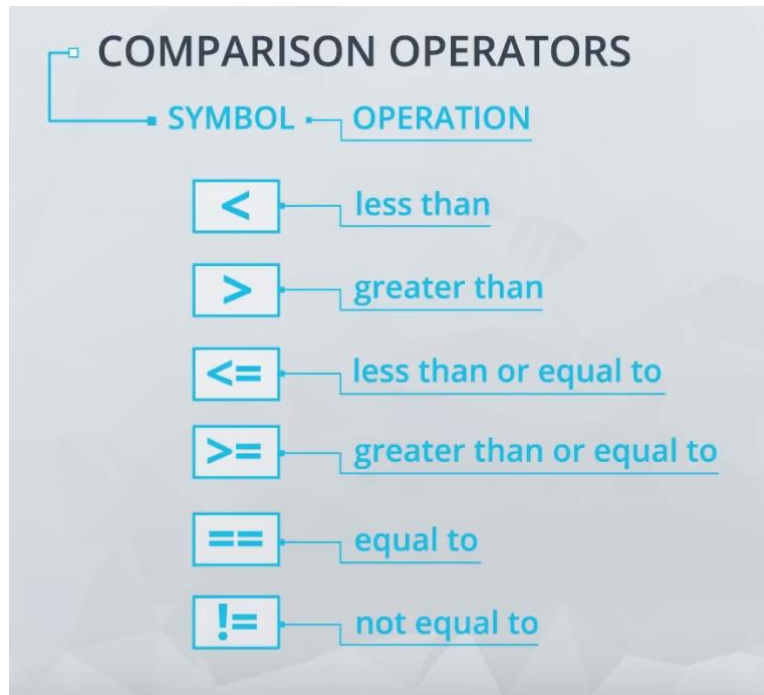
Mathematical, Comparison, and Logical Operators

You also learned about mathematical operators, as shown in the table below and logical operators shown in the table below that! Awesome job!

Mathematical Operators

ARITHMETIC OPERATORS	
SYMBOL	OPERATION
+	addition
-	subtraction
*	multiplication
/	division
**	exponentiation
%	modulo
//	integer division

Comparison and Logical Operators



Booleans, Comparison Operators, and Logical Operators

The bool data type holds one of the values **True** or **False**, which are often encoded as **1** or **0**, respectively.

There are 6 comparison operators that are common to see in order to obtain a **bool** value:

Comparison Operators

Symbol	Use Case	Bool	Operation
5 < 3		False	Less Than
5 > 3		True	Greater Than
3 <= 3		True	Less Than or Equal To
3 >= 5		False	Greater Than or Equal To
3 == 5		False	Equal To
3 != 5		True	Not Equal To

And there are three logical operators you need to be familiar with:

Logical Use	Bool	Operation
5 < 3 and 5 == 5	False	and - Evaluates if all provided statements are True
5 < 3 or 5 == 5	True	or - Evaluates if at least one of many statements is True
not 5 < 3	True	not - Flips the Bool Value