

Python Cheat Sheet: Basic Data Types

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	Description	Example
Boolean	<p>The Boolean data type is a truth value, either <code>True</code> or <code>False</code>.</p> <p>The Boolean operators ordered by priority: <code>not x</code> → “if x is False, then x, else y” <code>x and y</code> → “if x is False, then x, else y” <code>x or y</code> → “if x is False, then y, else x”</p> <p>These comparison operators evaluate to <code>True</code>: <code>1 < 2 and 0 <= 1 and 3 > 2 and 2 >= 2 and 1 == 1 and 1 != 0</code> # <code>True</code></p>	<pre>## 1. Boolean Operations x, y = True, False print(x and not y) # True print(not x and y or x) # True ## 2. If condition evaluates to False if None or 0 or 0.0 or '' or [] or {} or set(): # None, 0, 0.0, empty strings, or empty # container types are evaluated to False print("Dead code") # Not reached</pre>
Integer, Float	<p>An integer is a positive or negative number without floating point (e.g. <code>3</code>). A float is a positive or negative number with floating point precision (e.g. <code>3.14159265359</code>).</p> <p>The <code>('//')</code> operator performs integer division. The result is an integer value that is rounded toward the smaller integer number (e.g. <code>3 // 2 == 1</code>).</p>	<pre>## 3. Arithmetic Operations x, y = 3, 2 print(x + y) # = 5 print(x - y) # = 1 print(x * y) # = 6 print(x / y) # = 1.5 print(x // y) # = 1 print(x % y) # = 1s print(-x) # = -3 print(abs(-x)) # = 3 print(int(3.9)) # = 3 print(float(3)) # = 3.0 print(x ** y) # = 9</pre>
String	<p>Python Strings are sequences of characters.</p> <p>The four main ways to create strings are the following.</p> <ol style="list-style-type: none">1. Single quotes <code>'Yes'</code>2. Double quotes <code>"Yes"</code>3. Triple quotes (multi-line) <code>"""Yes</code> <code>We Can"""</code>4. String method <code>str(5) == '5'</code> # <code>True</code>5. Concatenation <code>"Ma" + "hatma"</code> # <code>'Mahatma'</code> <p>These are whitespace characters in strings.</p> <ul style="list-style-type: none">• Newline <code>\n</code>• Space <code>\s</code>• Tab <code>\t</code>	<pre>## 4. Indexing and Slicing s = "The youngest pope was 11 years old" print(s[0]) # 'T' print(s[1:3]) # 'he' print(s[-3:-1]) # 'ol' print(s[-3:]) # 'old' x = s.split() # creates string array of words print(x[-3] + " " + x[-1] + " " + x[2] + "s") # '11 old popes' ## 5. Most Important String Methods y = " This is lazy\t\n " print(y.strip()) # Remove Whitespace: 'This is lazy' print("DrDre".lower()) # Lowercase: 'drdre' print("attention".upper()) # Uppercase: 'ATTENTION' print("smartphone".startswith("smart")) # True print("smartphone".endswith("phone")) # True print("another".find("other")) # Match index: 2 print("cheat".replace("ch", "m")) # 'meat' print(','.join(["F", "B", "I"])) # 'F,B,I' print(len("Rumpelstiltskin")) # String length: 15 print("ear" in "earth") # Contains: True</pre>