

# Python Cheat Sheet - Basic Data Types

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	Description	Example
<b>Boolean</b>	<p>The Boolean data type is a truth value, either <b>True</b> or <b>False</b>.</p> <p>The Boolean operators ordered by priority: <b>not</b> x → “if x is False, then x, else y” <b>x and y</b> → “if x is False, then x, else y” <b>x or y</b> → “if x is False, then y, else x”</p> <p>These comparison operators evaluate to <b>True</b>: <b>1 &lt; 2 and 0 &lt;= 1 and 3 &gt; 2 and 2 &gt;=2 and 1 == 1 and 1 != 0 # True</b></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>
<b>Integer, Float</b>	<p>An integer is a positive or negative number without floating point (e.g. 3). A float is a positive or negative number with floating point precision (e.g. 3.14159265359).</p> <p>The <code>//</code> operator performs integer division. The result is an integer value that is rounded towards 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>
<b>String</b>	<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"><li>1. Single quotes <code>'Yes'</code></li><li>2. Double quotes <code>"Yes"</code></li><li>3. Triple quotes (multi-line) <code>"""Yes We Can"""</code></li><li>4. String method <code>str(5) == '5' # True</code></li><li>5. Concatenation <code>"Ma" + "hatma" # 'Mahatma'</code></li></ol> <p>These are whitespace characters in strings.</p> <ul style="list-style-type: none"><li>• Newline \n</li><li>• Space \s</li><li>• Tab \t</li></ul>	<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>