

## Module 1 Cheat Sheet: Python Basics

Package/Method	Description	Code Example
Comments	Comments are lines of text that are ignored by the Python interpreter when executing the code</td>	# This is a comment
Concatenation	Combines (concatenates) strings.	<p>Syntax:</p> <pre>concatenated_string = string1 + string2</pre> <p>Example:</p> <pre>result = "Hello" + " John"&lt;/td&gt;</pre>
Data Types	- Integer - Float - Boolean - String	<p>Example:</p> <pre>x=7 # Integer Value y=12.4 # Float Value is_valid = True # Boolean Value is_valid = False # Boolean Value F_Name = "John" # String Value</pre>
Indexing	Accesses character at a specific index.	<p>Example:</p> <pre>my_string="Hello" char = my_string[0]</pre>
len()	Returns the length of a string.	<p>Syntax:</p> <pre>len(string_name)</pre>

		Example: <pre>my_string="Hello" length = len(my_string)</pre>
lower()	Converts string to lowercase.	Example: <pre>my_string="Hello" uppercase_text = my_string.lower()</pre>
print()	Prints the message or variable inside `()'.	Example: <pre>print("Hello, world") print(a+b)</pre>
Python Operators	<ul style="list-style-type: none"> <li>- Addition (+): Adds two values together.</li> <li>- Subtraction (-): Subtracts one value from another.</li> <li>- Multiplication (*): Multiplies two values.</li> <li>- Division (/): Divides one value by another, returns a float.</li> <li>- Floor Division (//): Divides one value by another, returns the quotient as an integer.</li> <li>- Modulo (%): Returns the remainder after division.</li> </ul>	Example: <pre>x = 9 y = 4 result_add= x + y # Addition result_sub= x - y # Subtraction result_mul= x * y # Multiplication result_div= x / y # Division result_fdiv= x // y # Floor Division result_mod= x % y # Modulo</pre>
replace()	Replaces substrings.	Example: <pre>my_string="Hello" new_text = my_string.replace("Hello", "Hi")</pre>
Slicing	Extracts a portion of the string.	Syntax: <pre>substring = string_name[start:end]</pre>

			Example:  <code>my_string="Hello" substring = my_string[0:5]</code>
split()	Splits string into a list based on a delimiter.	Example:  <code>my_string="Hello" split_text = my_string.split(',')</code>	
strip()	Removes leading/trailing whitespace.	Example:  <code>my_string="Hello" trimmed = my_string.strip()</code>	
upper()	Converts string to uppercase.	Example:  <code>my_string="Hello" uppercase_text = my_string.upper()</code>	
Variable Assignment	Assigns a value to a variable.	Syntax:  <code>variable_name = value</code>	Example:  <code>name="John" # assigning John to variable name x = 5 # assigning 5 to variable x</code>



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