

Module 1 Cheat Sheet: Python Basics

| Package/Method | Description | Code Example |
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| 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"</td></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> |

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| | | Example: <code>my_string="Hello" length = len(my_string)</code> |
| lower() | Converts string to lowercase. | Example: <code>my_string="Hello" uppercase_text = my_string.lower()</code> |
| print() | Prints the message or variable inside '()'. | Example: <code>print("Hello, world") print(a+b)</code> |
| Python Operators | <ul style="list-style-type: none"> - Addition (+): Adds two values together. - Subtraction (-): Subtracts one value from another. - Multiplication (*): Multiplies two values. - Division (/): Divides one value by another, returns a float. - Floor Division (//): Divides one value by another, returns the quotient as an integer. - Modulo (%): Returns the remainder after division. | Example: <code>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</td></code> |
| replace() | Replaces substrings. | Example: <code>my_string="Hello" new_text = my_string.replace("Hello", "Hi")</code> |
| Slicing | Extracts a portion of the string. | <p>Syntax:</p> <pre>substring = string_name[start:end]</pre> <p>Example:</p> <pre>my_string="Hello" substring = my_string[0:5]</pre> |

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



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