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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	 1. 1 1. # This is a comment
Concatenation	the code<./td> Combines (concatenates) strings.	<pre>Copied! Syntax: 1. 1 1. concatenated_string = string1 + string2 Copied! Example: 1. 1 1. result = "Hello" + " John" Copied! Example:</pre>
Data Types	- Integer - Float - Boolean - String	1. 1 2. 2 3. 3 4. 4 5. 5 6. 6 7. 7 8. 8 9. 9 10. 10 1. x=7 2. # Integer Value 3. y=12.4 4. # Float Value 5. is_valid = True 6. # Boolean Value 7. is_valid = False 8. # Boolean Value 9. F_Name = "John" 10. # String Value
Indexing	Accesses character at a specific index.	Copied! Example: 1. 1 2. 2 1. my_string="Hello" 2. char = my_string[0] Copied! Syntax:
len()	Returns the length of a string.	<pre>1. 1 1. len(string_name) Copied! Example: 1. 1 2. 2 1. my_string="Hello" 2. length = len(my_string) Copied!</pre>
lower() print()	Converts string to lowercase. Prints the message or variable inside '()'.	Example: 1. 1 2. 2 1. my_string="Hello" 2. uppercase_text = my_string.lower() Copied! Example:
		 1. 1 2. 2 1. print("Hello, world") 2. print(a+b)

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                                                                                                                             Example:
                                                                                                                                 3. 3
4. 4
5. 5
                        - Addition (+): Adds two values together.
                                                                                                                                 6. 6
7. 7
                        - Subtraction (-): Subtracts one value from another.
                        - Multiplication (*): Multiplies two values.
Python Operators
                                                                                                                                 1. x = 9 y = 4
2. result_add= x + y # Addition
                        - Division (/): Divides one value by another, returns a float.
                        - Floor Division (//): Divides one value by another, returns the quotient as an integer.
                                                                                                                                 2. result_adu= x + y # AddItION
3. result_sub= x - y # Subtraction
4. result_mul= x * y # Multiplication
5. result_div= x / y # Division
6. result_fdiv= x // y # Floor Division
7. result_mod= x % y # Modulo
                        - Modulo (%): Returns the remainder after division.
                                                                                                                              Copied!
                                                                                                                             Example:
                                                                                                                                 1. 1
                                                                                                                                 2. 2
replace()
                        Replaces substrings.

    my_string="Hello"
    new_text = my_string.replace("Hello", "Hi")

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                                                                                                                             Syntax:
                                                                                                                                 1. 1
                                                                                                                                 1. substring = string_name[start:end]
                                                                                                                              Copied!
Slicing
                        Extracts a portion of the string.
                                                                                                                             Example:
                                                                                                                                 1. 1
                                                                                                                                 1. my_string="Hello" substring = my_string[0:5]
                                                                                                                              Copied!
                                                                                                                              Example:
                                                                                                                                 1. 1
2. 2
split()
                        Splits string into a list based on a delimiter.
                                                                                                                                 1. my_string="Hello"
2. split_text = my_string.split(",")
                                                                                                                              Copied!
                                                                                                                             Example:
                                                                                                                                 1. 1
strip()
                        Removes leading/trailing whitespace.

    my_string="Hello"

                                                                                                                                 2. trimmed = my_string.strip()
                                                                                                                               Copied!
                                                                                                                              Example:
upper()
                        Converts string to uppercase.

    my_string="Hello"
    uppercase_text = my_string.upper()

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                                                                                                                             Syntax:
                                                                                                                                 1. variable_name = value
                                                                                                                              Copied!
Variable
                        Assigns a value to a variable.
                                                                                                                              Example:
Assignment
                                                                                                                                 1. 1
                                                                                                                                 2. 2
                                                                                                                                 1. name="John" \# assigning John to variable name
                                                                                                                                 2. x = 5 \# assigning 5 to variable x
                                                                                                                              Copied!
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