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## **Module 1 Cheatsheet: Python Basics**

Package/Method	Description	Code Example
		1. 1
Comments	Comments are lines of text that are ignored by the Python interpreter when executing the code	1. # This is a comment
		Copied!
		Syntax:
		1. 1
		<pre>1. variable_name = value</pre>
		Copied!
Variable Assignment	Assigns a value to a variable	Example:
		1. 1 2. 2
		1. name="John" # assigning John to variable name 2. $x = 5$ # assigning 5 to variable $x$
		Copied!
Data Types	• Integer	Example:
	• Float	1. 1
	Boolean	2. 2 3. 3
	• String	4. 4 5. 5
	- Sumg	<ol> <li>x=7 # Integer Value</li> <li>y=12.4 # Float Value</li> <li>is_valid = True # Boolean Value</li> <li>is_valid = False # Boolean Value</li> </ol>

5. F\_Name = "John" # String Value

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Example:

1. 1 2. 2

1. print("Hello, world")

2. print(a+b)

Copied!

Syntax:

1. 1

1. concatenated\_string = string1 + string2

Copied!

Example:

1. 1

1. result = "Hello" + " John"

Copied!

Syntax:

1. 1

len(string\_name)

Copied!

Example:

1. 1

2. 2

my\_string="Hello"

2. length = len(my\_string)

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Example:

print() Prints the message or variable inside `()`

Concatenation Combines (concatenates) strings

len()

Returns the length of a string

upper()

Converts string to uppercase

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·		1. 1 2. 2
		<pre>1. my_string="Hello" 2. uppercase_text = my_string.upper()</pre>
		Copied!
		Example:
lower()	Converte etning to lawerence	1. 1 2. 2
	Converts string to lowercase	<pre>1. my_string="Hello" 2. uppercase_text = my_string.lower()</pre>
		Copied!
		Syntax:
		1. 1
		<pre>1. substring = string_name[start:end]</pre>
		Copied!
Slicing	Extracts a portion of the string	Example:
		1. 1 2. 2
		<pre>1. my_string="Hello" 2. substring = my_string[0:5]</pre>
		Copied!
		Example:
Indexing	Accesses character at a specific index	1. 1 2. 2
mucamg	Accesses character at a specific index	<ol> <li>my_string="Hello"</li> <li>char = my_string[0]</li> </ol>
		Copied!
strip()	Removes leading/trailing whitespace	Example:
		1. 1

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```
2. 2

    my_string="Hello"

                                                                                       2. trimmed = my_string.strip()
                                                                                      Copied!
                                                                                    Example:
                                                                                       1. 1
                                                                                       2. 2
replace()
                       Replaces substrings

    my_string="Hello"

                                                                                       2. new_text = my_string.replace("Hello", "Hi")
                                                                                      Copied!
                                                                                    Example:
                                                                                       1. 1
                                                                                       2. 2
split()
                       Splits string into a list based on a delimiter

    my string="Hello"

                                                                                       2. split text = my string.split(",")
                                                                                      Copied!
                                                                                    Example:
                                                                                       1. 1
                           • Addition (+): Adds two values together.
                                                                                       2. 2
                                                                                       3. 3
                           • Subtraction (-): Subtracts one value from another.
                                                                                       4. 4
                                                                                       5. 5
                           • Multiplication (*): Multiplies two values.
                                                                                       6.6
                                                                                       7. 7
                                                                                       8.8
                           • Division (/): Divides one value by another, returns a
Python Operators
                             float.
                                                                                       1. x = 9
                                                                                       2. v = 4
                           • Floor Division (//): Divides one value by another, returns
                                                                                       3. result add= x + y
                                                                                                                # Addition
                                                                                       4. result sub= x - y
                             the quotient as an integer.
                                                                                                                # Subtraction
                                                                                       5. result mul= x * y # Multiplication
                                                                                       6. result div= x / y # Division
                           • Modulo (%): Returns the remainder after division.
                                                                                       7. result fdiv= x // y # Floor Division
                                                                                       8. result mod= x % y # Modulo
                                                                                      Copied!
```

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## Changelog

**Date** Version Changed by Change Description 2023-08-10 0.1 Pooja Patel Initial version created

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