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.	Syntax:
		```concatenated_string = string1 + string2```
		
		Example:
		```result = "Hello" + " John"</td>```

Data Types	- Integer - Float - Boolean - String	Example:
		```x=7```
		```# Integer Value```
		```y=12.4```
		```# Float Value```
		```is_valid = True```
		```# Boolean Value```
		```is_valid = False```
		```# Boolean Value```
		```F_Name = "John"```
		```# String Value```

Indexing	Accesses character at a specific index.	Example:
		```my_string="Hello"```
		```char = my_string[0]```

len()	Returns the length of a string.	Syntax: ```len(string_name)```

		Example: ```\nmy_string="Hello"\nlength = len(my_string)\n```
lower()	Converts string to lowercase.	Example: ```\nmy_string="Hello"\nuppercase_text = my_string.lower()\n```
print()	Prints the message or variable inside `()`.	Example: ```\nprint("Hello, world")\nprint(a+b)\n```
Python Operators	- 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: ```\nx = 9 y = 4\nresult_add= x + y # Addition\nresult_sub= x - y # Subtraction\nresult_mul= x * y # Multiplication\nresult_div= x / y # Division\nresult_fdiv= x // y # Floor Division\nresult_mod= x % y # Modulo</td>\n```
replace()	Replaces substrings.	Example: ```\nmy_string="Hello"\nnew_text = my_string.replace("Hello", "Hi")\n```
Slicing	Extracts a portion of the string.	Syntax: ```\nsubstring = string_name[start:end]\n```

		Example:
		
		``python
		my_string="Hello" substring = my_string[0:5]
		``

split()	Splits string into a list based on a delimiter.	Example:
		
		``python
		my_string="Hello"
		split_text = my_string.split(",")
		``

strip()	Removes leading/trailing whitespace.	Example:
		
		``python
		my_string="Hello"
		trimmed = my_string.strip()
		``

upper()	Converts string to uppercase.	Example:
		
		``python
		my_string="Hello"
		uppercase_text = my_string.upper()
		``

Variable Assignment	Assigns a value to a variable.	Syntax:
		
		``python
		variable_name = value
		``
		
		Example:
		
		``python
		name="John" # assigning John to variable name
		x = 5 # assigning 5 to variable x
		``