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>	```python # This is a comment```
Concatenation	Combines (concatenates) strings.	**Syntax:** ```python concatenated_string = string1 + string2``` **Example:** ```python result = "Hello" + " John"</td>```

Data Types	- Integer - Float - Boolean - String	**Example:**
		``python
		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:** ```python my_string="Hello" char = my_string[0]```
len()	Returns the length of a string.	**Syntax:** ```python len(string_name)``` **Example:** ```python my_string="Hello" length = len(my_string)```
lower()	Converts string to lowercase.	**Example:** ```python my_string="Hello" uppercase_text = my_string.lower()```
print()	Prints the message or variable inside `()`.	**Example:** ```python print("Hello, world")```

| | | ```
2    print(a+b)
``` |
| Python Operators | - Addition (+): Adds two values together.<br>- Subtraction (-): Subtracts one value from another.<br>- Multiplication (*): Multiplies two values.<br>- Division (/): Divides one value by another, returns a float.<br>- Floor Division (//): Divides one value by another, returns the quotient as an integer.<br>- Modulo (%): Returns the remainder after division. | Example:<br><br>```
1    x = 9 y = 4
2    result_add= 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</td>
``` |
| replace() | Replaces substrings. | Example:<br><br>```
1    my_string="Hello"
2    new_text = my_string.replace("Hello", "Hi")
``` |
| Slicing | Extracts a portion of the string. | Syntax:<br><br>```
1    substring = string_name[start:end]
```<br><br>Example:<br><br>```
1    my_string="Hello" substring = my_string[0:5]
``` |
| split() | Splits string into a list based on a delimiter. | Example:<br><br>```
1    my_string="Hello"
2    split_text = my_string.split(",")
``` |
| strip() | Removes leading/trailing whitespace. | Example:<br><br>```
1    my_string="Hello"
2    trimmed = my_string.strip()
``` |
| upper() | Converts string to uppercase. | Example:<br><br>```
1    my_string="Hello"
2    uppercase_text = my_string.upper()
``` |
| Variable Assignment | Assigns a value to a variable. | Syntax:<br><br>```
1    variable_name = value
```<br><br>Example:<br><br>```
1    name="John" # assigning John to variable name
2    x = 5 # assigning 5 to variable x
``` |

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