# 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:<br>`concatenated_string = string1 + string2`<br>Example:<br>`result = "Hello" + " John"</td>` |
| Data Types | - Integer - Float - Boolean - String | Example:<br>`x=7`<br>`# Integer Value`<br>`y=12.4`<br>`# Float Value`<br>`is_valid = True`<br>`# Boolean Value`<br>`is_valid = False`<br>`# Boolean Value`<br>`F_Name = "John"`<br>`# String Value` |
| Indexing | Accesses character at a specific index. | Example:<br>`my_string="Hello"`<br>`char = my_string[0]` |
| len() | Returns the length of a string. | Syntax:<br>`len(string_name)` |

| | | |
|---|---|---|
| | | Example:<br>`my_string="Hello"`<br>`length = len(my_string)` |
| lower() | Converts string to lowercase. | Example:<br>`my_string="Hello"`<br>`uppercase_text = my_string.lower()` |
| print() | Prints the message or variable inside `()`. | Example:<br>`print("Hello, world")`<br>`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>`x = 9 y = 4`<br>`result_add= x + y # Addition`<br>`result_sub= x - y # Subtraction`<br>`result_mul= x * y # Multiplication`<br>`result_div= x / y # Division`<br>`result_fdiv= x // y # Floor Division`<br>`result_mod= x % y # Modulo</td>` |
| replace() | Replaces substrings. | Example:<br>`my_string="Hello"`<br>`new_text = my_string.replace("Hello", "Hi")` |
| Slicing | Extracts a portion of the string. | Syntax:<br>`substring = string_name[start:end]`<br><br>Example:<br>`my_string="Hello" substring = my_string[0:5]` |

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

Skills Network