

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

integer.
- Modulo (%): Returns the remainder after division.

replace() Replaces substrings.

Slicing Extracts a portion of the string.

split() Splits string into a list based on a delimiter.

strip() Removes leading/trailing whitespace.

upper() Converts string to uppercase.

Variable
Assignment Assigns a value to a variable.

```
5. 5
6. 6
7. 7

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
```

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Example:

```
1. 1
2. 2

1. my_string="Hello"
2. new_text = my_string.replace("Hello", "Hi")
```

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Syntax:

```
1. 1

1. substring = string_name[start:end]
```

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Example:

```
1. 1

1. my_string="Hello" substring = my_string[0:5]
```

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Example:

```
1. 1
2. 2

1. my_string="Hello"
2. split_text = my_string.split(",")
```

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Example:

```
1. 1
2. 2

1. my_string="Hello"
2. trimmed = my_string.strip()
```

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Example:

```
1. 1
2. 2

1. my_string="Hello"
2. uppercase_text = my_string.upper()
```

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Syntax:

```
1. 1

1. variable_name = value
```

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Example:

```
1. 1
2. 2

1. name="John" # assigning John to variable name
2. x = 5 # assigning 5 to variable x
```

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