Python Starter Cheat Sheet

Videos 1 to 5 of the Python Series: install, run, print, syntax, indentation and comments. Free to use and share with your classmates.

1. Check that Python is installed

System	Type in the terminal	Expected
Mac / Linux	`python3 --version`	`Python 3.x.x`
Windows	`py --version`	`Python 3.x.x`

Windows installer: tick **Add python.exe to PATH** on the first screen. Download only from **python.org**.

2. Run a program

Save the file as `hello.py` (**Cmd/Ctrl + S**), then use the Run button (top right in VS Code) or the terminal:

```
python3 hello.py        # Mac / Linux
py hello.py             # Windows
```

VS Code: open your folder with **File > Open Folder...**, make a new file ending in `.py`, and install the **Python** extension by Microsoft.

3. print(): show something on the screen

```
print("Hello, World!")
print("Hello", "Python")   # values are separated by a space
print(2 + 3)               # a calculation, no quotes
# Output:
# Hello, World!
# Hello Python
# 5
```

Text goes inside quotes. Numbers and calculations do not.

4. Syntax rules

Rule	Example
Python runs your code line by line, from top to bottom.	`print("first")` runs before `print("second")`
Every opening quote and bracket needs its closing one.	`print("Hi")` not `print("Hi)`
Capital and small letters are different.	`print` works, `Print` does not
One statement per line.	Put each `print(...)` on its own line

5. Indentation and comments

Indentation (spaces at the start of a line) shows which lines belong together. Use **4 spaces**, or press **Tab** in VS Code. A line ending with `:` expects an indented block under it.

```
if 5 > 2:
    print("Five is greater than two")    # indented: it belongs to the if
```

A comment starts with #. Python ignores it. Toggle comments in VS Code with **Cmd + /** (Mac) or **Ctrl + /** (Windows).

```
# this is a comment
print("Hello")    # a comment can sit after code
```

Common errors and how to fix them

These are the real messages from Python 3.12. Read the **last line** of the error first.

You typed	Python says	The fix
`Print("Hello")`	`NameError: name 'Print' is not defined`	Use a small **p**: `print`. Spelling mistakes in a name (like `prnt`) give the same error.
`print("Hello`	`SyntaxError: unterminated string literal`	Add the closing quote and bracket: `print("Hello")`
`if 5 > 2:` `print("yes")`	`IndentationError: expected an indented block after 'if' statement`	Indent the line under the `if` with 4 spaces.
`print("a")` `    print("b")`	`IndentationError: unexpected indent`	Remove the extra spaces. Only blocks after a `:` are indented.
`python hello.py` on a Mac	`command not found: python`	Type `python3 hello.py` instead.

VS Code shortcuts

Action	Mac	Windows
Save the file	Cmd + S	Ctrl + S
Comment or uncomment a line	Cmd + /	Ctrl + /
Open the terminal	Ctrl + `	Ctrl + `

Tricks that make you look like a pro

Trick	Type this	You see
Draw a line	`print("-" * 20)`	`--------------------`
Change the separator	`print("a", "b", "c", sep="-")`	`a-b-c`
Stay on the same line	`print("Loading", end="...")` `print("done")`	`Loading...done`
New line or tab inside text	`print("One\nTwo")` `print("A\tB")`	two lines, and a gap between A and B
A quote inside text	`print("She said \"hi\"")`	`She said "hi"`
Power (a quick calculator)	`print(2 ** 10)`	`1024`
Try code instantly	Type `python3` alone, then `2 + 3`	`5` (leave with `exit()`)
Sneak peek: variables	`name = "Hasan"` `print(f"Hello {name}")`	`Hello Hasan`

Practice (try first, then look at the answers)

1. Print two lines: *My name is Rahim* and *I am learning Python*.
2. Fix this: `print("Welcome)`
3. Fix this: `if 3 > 1:` then `print("three is bigger")` on the next line with no indent.
4. Add a comment above a `print` line explaining what it does.

Answers

```
# 1
print("My name is Rahim")
print("I am learning Python")

# 2
print("Welcome")
```

```
# 3
if 3 > 1:
    print("three is bigger")

# 4
# show a greeting
print("Hello")
```