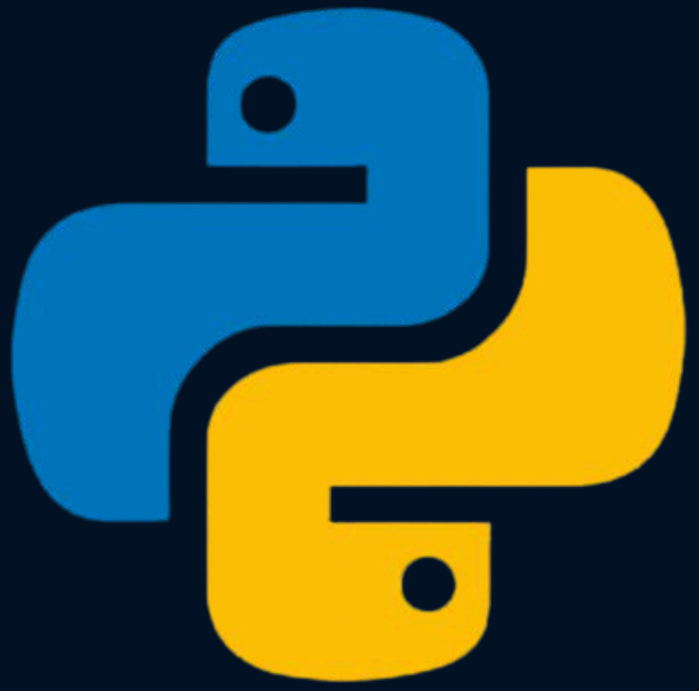
Otaku Tube

PYTHON CHEAT SHEET



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1. VARIABLES & DATA TYPES

```
x = 10                          # int
pi = 3.14                       # float
name = "Madara"                 # str
is_active = True                # bool
fruits = ['apple']              # list
person = {'name': 'Zed'}        # dict
```

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2. BASIC I/O

```
print("Hello, world!")
name = input("Enter name: ")
```

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3. STRING MANIPULATION

```
greet = "Hello" + " " + "World"
name = "Madara".upper()     # 'MADARA'
msg = " Python ".strip()    # 'Python'
```

4. OPERATORS

```
# Arithmetic: + - * / % // **
# Comparison: == != > < >= <=
# Logical: and or not
# Membership: in, not in
```

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5. CONDITIONALS

```
if x > 5:
    print("Greater")
elif x == 5:
    print("Equal")
else:
    print("Smaller")
```

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6. LOOPS

```
# for loop
for i in range(5):
    print(i)

# while loop
while x < 10:
    x += 1
```

7. FUNCTIONS

```
def greet(name):
    return "Hello " + name

print(greet("Madara"))
```

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8. LIST OPERATIONS

```
fruits = ['apple', 'banana']
fruits.append('mango')
fruits.remove('banana')
print(fruits[0])
```

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9. DICTIONARIES

```
person = {'name': 'Zed', 'age': 25}
print(person['name'])
person['job'] = 'Dev'
```

10. CLASSES & OBJECTS

```
class Person:
    def __init__(self, name):
        self.name = name

    def greet(self):
        return "Hi " + self.name

p = Person("Madara")
print(p.greet())
```

---

11. EXCEPTION HANDLING

```
try:
    x = 1 / 0
except ZeroDivisionError:
    print("Error!")
finally:
    print("Done")
```

12. FILE HANDLING

```
# Writing
with open("file.txt", "w") as f:
    f.write("Hello World")

# Reading
with open("file.txt", "r") as f:
    data = f.read()
```

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13. IMPORT MODULES

```
import math
print(math.sqrt(16))
```

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14. LIST COMPREHENSION

```
squares = [x**2 for x in range(5)]     # [0, 1, 4, 9, 16]
```

15. LAMBDA FUNCTION

```
add = lambda a, b: a + b
print(add(2, 3))  # 5
```

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16. COMMON BUILT-IN FUNCTIONS

```
len(), type(), int(), str(), list(), dict(),
 range(), sum(), sorted()
```

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17. WORKING WITH JSON

```
import json
data = {'name': 'Madara'}
json_str = json.dumps(data)
parsed = json.loads(json_str)
```

18. WORKING WITH DATES

```
from datetime import datetime
now = datetime.now()
print(now.strftime("%Y-%m-%d %H:%M"))
```

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19. INSTALL PACKAGE (CLI)

```
pip install package-name
```

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20. VIRTUAL ENVIRONMENT

```
python -m venv venv
source venv/bin/activate      # Linux/Mac
venv\Scripts\activate         # Windows
```

⚙️ BONUS: Useful Shortcuts (in Python)

Shortcut	Description
`__init__()`	Constructor in class
`*args, **kwargs`	Variable arguments
`if __name__ == '__main__'`	Script entry point
`f"{var}"`	f-string for formatting