PYTHON CHEATSHEET

AKASH • PYTHON & TECH ENTHUSIAST
@PYCODE.HUBB

BASIC PYTHON SYNTAX

1. Print to Console:
```
print("Hello, World!")
```

2. Variable Assignment:
```
a = 'pycode.hubb'
```

3. Commenting:
```
# This is single line comment!
```

4. Multi-line Comment:
```
"""This is a multi-line comment!"""
```

5. Input from User:
```
name = input("Enter your name: ")
```

6. Check Data Type:
```
type(x)
```

7. Type Casting:
```
int("10"), float("10.5"), str(100)
```

DATA STRUCTURES

1. List (Array):
```
my_list = [1, 2, 3, 4, 5]
```

2. Access List Item:
```
my_list[0]
```

3. List Slicing:
```
my_list[1:4]
```

4. Add Item to List:
```
my_list.append(6)
```

5. Remove Item from List:
```
my_list.remove(3)
```

6. Tuple:
```
my_tuple = (1, 2, 3, 4)
```

7. Set:
```
my_set = {1, 2, 3, 4}
```

8. Dictionary:
```
dict = {"key1": "val1", "key2": "val2"}
```

9. Access Dictionary Value:
```
my_dict["key1"]
```

10. Add Key-Value Pair:
```
my_dict["key3"] = "value3"
```

CONTROL FLOW

1. If Statement: `if x > 10: print("x is greater than 10")`
2. If-Else Statement: `if x > 5: print("x is high") else: print("x is low")`
3. Elif Statement: `if x > 10: print("x is high") elif x > 5: print("x is avg") else: print("x is low")`
4. For Loop: `for i in range(5):  print(i)`
5. While Loop: `x = 0 while x < 10:  x += 1`
6. Break: `for i in range(5): if i == 3:  break`
7. Continue: `for i in range(5): if i == 3: continue`

FUNCTIONS

1. Define Function: `def my_function():  print("Hello from function!")`
2. Function with Parameters: `def greet(name):  print(f"Hello, {name}!")`
3. Return Value from Function: `def add(a, b):  return a + b`
4. Lambda Function: `add = lambda a, b: a + b`

STRING MANIPULATION

1. Concatenate Strings: `full_name = "Pycode" + "Hubb"`
2. String Length: `len("Hello")`
3. Convert to Upper Case: `"hello".upper()`
4. Convert to Lower Case: `"HELLO".lower()`
5. Substring: `"Hello, World!"[7:12]`

STRING MANIPULATION

6. Find Substring: `"Hello, World!".find("World")`

7. Replace Substring: `"Hello, World!".replace("World", "Python")`

8. Split String: `"Hello, World!".split(",")`

FILE HANDLING

1. Open a File: `file = open("example.txt", "r")`

2. Read File: `content = file.read()`

3. Read Line by Line: `lines = file.readlines()`

4. Write to a File: `file = open("example.txt", "w")  file.write("Hello, World!")`

5. Close a File: `file.close()`

LIST COMPREHENSION

1. Basic List Comprehension: `file = open("example.txt", "r")`

2. List Comprehension with Condition: `[x for x in range(10) if x % 2 == 0]`

ERROR HANDLING

1. Try-Except Block: `file = open("example.txt", "r")`

2. Finally Block: `try: x = 10 / 0 except ZeroDivisionError: print("Error!") finally: print("This runs always")`

WORKING WITH LIBRARIES

1. Importing a Library: `import math`
2. Using a Library Function: `math.sqrt(16)`
3. Install a Library: `pip install pandas`
4. Import Specific Function: `from math import sqrt`

NUMPY FOR NUMERICAL OPERATIONS

1. Import NumPy: `import numpy as np`
2. Create NumPy Array: `arr = np.array([1, 2, 3, 4, 5])`
3. Array Reshaping: `arr = arr.reshape(5, 1)`
4. Array Operations: `arr + 10 arr2 = np.array([10, 20, 30, 40, 50]) arr + arr2`
5. Array Slicing: `arr[1:4]`
6. Array Statistics: `np.mean(arr) np.median(arr) np.std(arr)`

PANDAS FOR DATA HANDLING

1. Import Pandas: `import pandas as pd`
2. Create DataFrame: `df = pd.DataFrame({"Name": ["Alice"], "Age": [25]})`
3. Read CSV File: `df = pd.read_csv("data.csv")`
4. View Data: `df.head()`
5. Basic Statistics: `df.describe()`
6. Filter Data: `df[df["Age"] > 25]`

MATPLOTLIB FOR PLOTTING

1. Import Matplotlib:

```
import matplotlib.pyplot as plt
```

2. Simple Plot:

```
plt.plot([1, 2, 3], [4, 5, 6]) plt.show()
```

3. Bar Plot:

```
plt.bar([1, 2, 3], [4, 5, 6]) plt.show()
```

4. Histogram:

```
plt.hist([1, 2, 2, 3, 4, 5]) plt.show()
```

5. Scatter Plot:

```
plt.scatter([1, 2, 3], [4, 5, 6]) plt.show()
```

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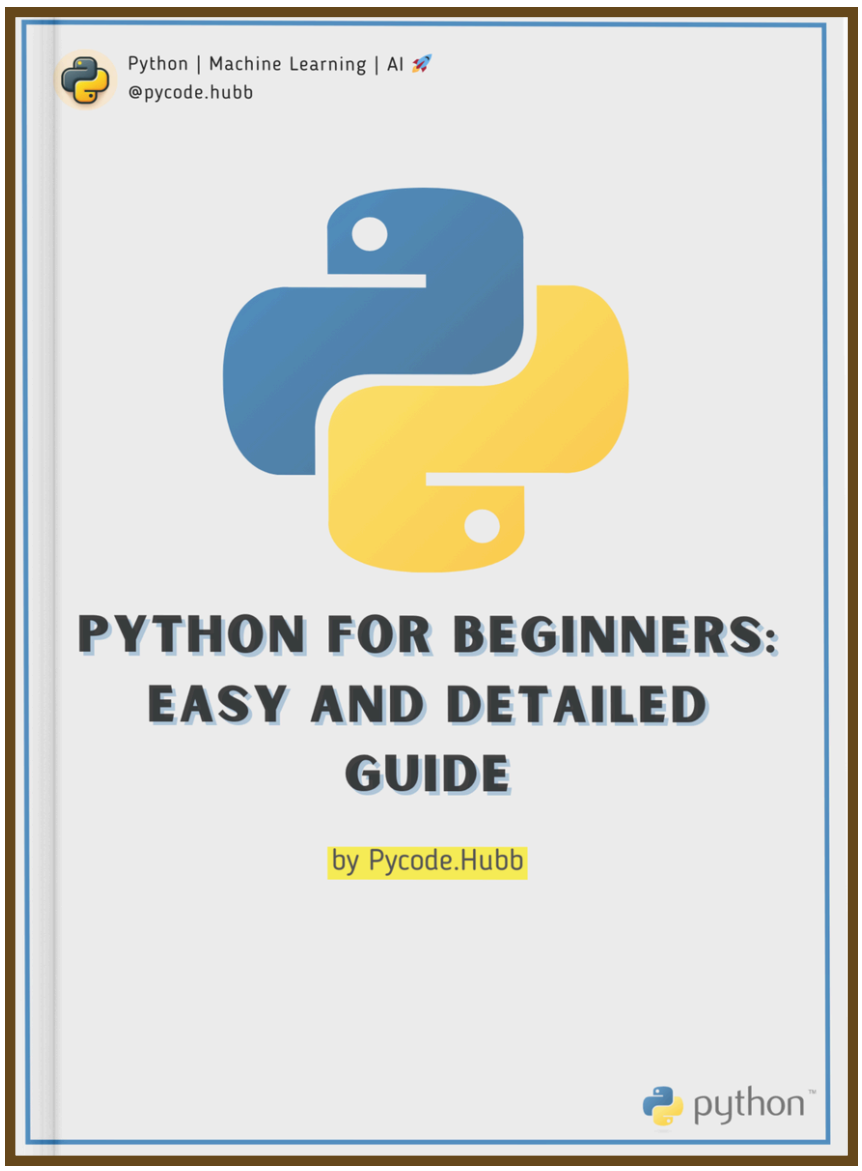

🔗 Link in the Bio 🔗