

Python Cheatsheet for Basic Coding

1. Basic Syntax

Comments

Single-line

""" Multi-line comment """

Print

print("Hello, World!")

2. Variables & Data Types

a = 10 # int

b = 3.14 # float

name = "Anjan" # string

is_valid = True # boolean

x = None # NoneType

3. User Input

name = input("Name: ")

age = int(input("Age: "))

a, b = map(int, input().split())

arr = list(map(int, input().split()))

matrix = [list(map(int, input().split())) for _ in range(n)]

4. Data Structures

List

fruits = ["apple", "banana"]

fruits.append("orange")

Tuple

```
point = (3, 4)
```

Set

```
s = {1, 2, 3}
```

```
s.add(4)
```

Dictionary

```
person = {"name": "Anjan", "age": 25}
```

5. Control Flow

```
if age >= 18:
```

```
    print("Adult")
```

```
for i in range(5):
```

```
    print(i)
```

```
while count < 5:
```

```
    count += 1
```

6. Functions

```
def add(a, b):
```

```
    return a + b
```

7. Error Handling

```
try:
```

```
    result = 10 / 0
```

```
except ZeroDivisionError:
```

```
    print("Error")
```

finally:

```
print("Done")
```

8. Useful Built-in Functions

len(), type(), str(), int(), float(), list(), dict(), set(), input(), print(), sum(), max(), min(), sorted()

9. String Operations

```
s = "hello"
```

```
s.upper(), s[::-1], s.split()
```

10. List Comprehension

```
squares = [x*x for x in range(5)]
```

```
evens = [x for x in range(10) if x % 2 == 0]
```

11. File Handling

```
with open("file.txt", "w") as f:
```

```
    f.write("Hello")
```

```
with open("file.txt", "r") as f:
```

```
    content = f.read()
```

Common Shortcuts

Reverse: `arr[::-1]`

Sort: `sorted(arr)`

Sum: `sum(arr)`

Min/Max: `min(arr), max(arr)`