Table of contents

Python Basics Cheat Sheet

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Functions

Defining a Function

```python
def function_name(parameter1: type, parameter2: type) -> return_type:
    # function body
    return value
```

Calling a Function

```python
result = function_name(argument1, argument2)
```

Loops

For Loop

```python
for item in sequence:
    # code to be executed for each item
```

Example:

1

```python
for i in range(1, 11):
    print(i)
```

While Loop

```python
while condition:
    # code to be executed while condition is true
    # remember to update the condition
```

Example:

```python
i = 1
while i <= 10:
    print(i)
    i += 1
```

Conditional Statements

If Statement

```python
if condition:
    # code to be executed if condition is true
```

If-Else Statement

```python
if condition:
    # code to be executed if condition is true
else:
    # code to be executed if condition is false
```

If-Elif-Else Statement

```python
if condition1:
    # code for condition1
elif condition2:
    # code for condition2
else:
    # code if no conditions are true
```

Tips

- Use descriptive function names
- Specify parameter and return types for clarity
- Indent properly in loops and conditional statements
- Remember to increment counters in while loops
- Use `range()` for numeric loops in for statements
- Consider multiple conditions with elif for complex logic