

Python Basics - Loops

1. For Loop:

Used to iterate over a sequence (list, tuple, string, etc.).

Example:

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

```
    print(i)
```

Output: 0 1 2 3 4

2. While Loop:

Repeats as long as a condition is True.

Example:

```
i = 0
```

```
while i < 5:
```

```
    print(i)
```

```
    i += 1
```

3. Loop Control Statements:

- break : Exit the loop immediately.
- continue : Skip current iteration and continue.
- pass : Does nothing, used as placeholder.

4. Nested Loops:

Loops inside loops.

Example:

```
for i in range(3):
```

```
    for j in range(2):
```

```
        print(i, j)
```

5. Else with Loop:

In Python, loops can have an else block that executes when loop ends normally.

Example:

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

```
    print(i)
```

```
else:
```

```
    print("Loop finished!")
```