

Python Break Statement

Break in Python terminates a loop completely when an external condition is given or not given. Python break is used within the code and is usually placed after an “if” statement.

A break statement can only be used **inside a loop**. This is because the purpose of a break statement is to stop a loop. You can use a break statement inside an if statement, but only if that if statement is inside a loop. The syntax of the break statement is: The syntax of the break statement is:

```
for val in sequence:
```

```
    if condition:
```

```
        break
```

A cyan line starts from the 'break' statement, goes left, then down, then right, ending in an arrow pointing out of the loop structure.

```
while condition:
```

```
    if condition:
```

```
        break
```

A cyan line starts from the 'break' statement, goes left, then down, then right, ending in an arrow pointing out of the loop structure.

Python Continue Statement

The **continue** statement is used to **skip the current iteration** of the loop and the control flow of the program goes to the next iteration. For example-

```
→ for val in sequence:  
    if condition:  
        continue
```

```
→ while condition:  
    if condition:  
        continue
```

All about Python *List*[]

- Ordered
- Changeable
- Allow Duplicates

```
L1 = [ 'data', 'science' ]
```

```
L2 = [ 1, 40, 300, 'shakil', True, False ]
```

List Comprehension: Elegant Way to Create Lists

List comprehension is an elegant and concise way to create a new list from an existing list in Python. A list comprehension consists of an expression followed by **for** statement inside square brackets.

Syntax: `newlist = [Expression for item in iterable if condition == True]`
`newlist = [x for x in items]`

All about Python *Tuples()*

- Ordered
- **Unchangeable**
- Allow Duplicates

T1 = ('data', 'science')

T2 = (1, 40, 300, 'Shakil', True, False)

All about Python *Set*{}

- Unordered
- Unchangeable
- Duplicates Not Allowed

S1 = { 'data', 'science' }

S2 = { 1, 40, 300, 'shakil', True, False }

All about Python *Dictionary*{}

- Ordered (Python 3.7+)
- *Changeable*
- Does not Allow Duplicates

```
D1 = { "brand": "Apple", "model": "13 Pro Max", "year": 2022 }
```

Here, (brand, model, year = id or key) & (Apple, 13 pro max, 2022 = Data)

All about Python *Data Frame*

Diagram illustrating the structure of a Python Data Frame:

Columns (labeled above the table headers):

- Name
- Team
- Number
- Position
- Age

Rows (labeled to the left of the table):

The table contains 7 rows of data (indexed 0 to 6). The data is as follows:

| | Name | Team | Number | Position | Age |
|---|-----------------|----------------|--------|----------|------|
| 0 | Avery Bradley | Boston Celtics | 0.0 | PG | 25.0 |
| 1 | John Holland | Boston Celtics | 30.0 | SG | 27.0 |
| 2 | Jonas Jerebko | Boston Celtics | 8.0 | PF | 29.0 |
| 3 | Jordan Mickey | Boston Celtics | NaN | PF | 21.0 |
| 4 | Terry Rozier | Boston Celtics | 12.0 | PG | 22.0 |
| 5 | Jared Sullinger | Boston Celtics | 7.0 | C | NaN |
| 6 | Evan Turner | Boston Celtics | 11.0 | SG | 27.0 |

Data (labeled below the table, indicating the content of the rows and columns):

Python Resources:

- Python Official Docs: [[Link](#)]
- 60 Days of Python: [[Link](#)]
- Book: [[Link](#)]
- Read our blogs: www.aiquest.org/blog