

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, moves left, then down, and then right as an arrow pointing out of the loop structure.

```
while condition:
```

```
    if condition:
```

```
        break
```

A cyan line starts from the 'break' statement, moves left, then down, and then right as 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 *Array[]*

- Ordered
- Duplicate Values Allowed
- Changeable

A[3,4,5]

Type Code	C Type	Python Type	Minimum Size In Bytes
'b'	signed char	int	1
'B'	unsigned char	int	1
'u'	Py_UNICODE	unicode character	2
'h'	signed short	int	2
'H'	unsigned short	int	2
'i'	signed int	int	2
'I'	unsigned int	int	2
'l'	signed long	int	4
'L'	unsigned long	int	4
'q'	signed long long	int	8
'Q'	unsigned long long	int	8
'f'	float	float	4
'd'	double	float	8

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):

Python Resources:

Python Official Docs: [[Link](#)]

60 Days of Python: [[Link](#)]

Python with Problem-Solving: [[Link](#)]

Book: [[Link](#)]

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