

Python Statement

- Instruction written in the source code for execution are called statement.
- There are different types of statement in the Python Programming language - like
 - Assignment statement
 - Conditional statement
 - Looping statement

For example :- `a = 50` is an assignment

• Multi-line Statement

In Python, the end of a statement is marked by a newline character.

Statements in Python can be extended to one or more lines using parentheses `()`, braces `{}`, square brackets `[]`, semi-colon `;`, continuation character slash `\`.

For example:-

(I) $a = 1+2+3 + \backslash$
 $4+5+6 + \backslash$
 $7+8+9$

→ This is an explicit line continuation.

(II) $a = (1+2+3 +$
 $4+5+6 +$
 $7+8+9)$

→ Here the surrounding parentheses () do the continuation implicitly.

(III) $color = ['red',$
 $'blue',$
 $'green']$

→ declared using square brackets

(IV) $a = \{ 1+2+3+4+5+6 +$
 $7+8+9 \}$

→ declared using braces {}.

(V) $flag = 2, ropes = 3, pole = 4$

→ declared using semicolons (;).

Indentation

- Indentation

- Most of the Programming languages like C, C++, JAVA use {} braces to define a block of code.
Python, however, uses indentation.
- It is one of the distinctive features of Python is its use of indentation to highlight the blocks of code.
- Whitespace is used for indentation in Python.
- Indentation refers to spaces that are used in the beginning of a statement.
- Generally, four whitespaces are used for indentation, and are preferred over tabs.

For example:

```
if 5 > 2 :
```

```
    print("5 is greater")
```

```
if ( 6 > 2 ) :
```

```
    print("6 is greater")
```

```
print("Rest of code")
```

- The enforcement of indentation in Python makes the code look neat and clean.
- Indentation can be ignored in line continuation, but it's always a good idea to indent.
- It makes the code more readable.

for example

```
if True
    print('Hello')
    a=5
```

and

```
if True: print('Hello'); a=5
```

(both are valid and do the same thing, but the former style is clearer).

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