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!-

(1.) $a = 1+2+3+ \backslash$
$\qquad 4+5+6+ \backslash$
$\qquad 7+8+9$
→ This is an explicit line continuation.

(II) $a = (1+2+3+$
$\qquad 4+5+6+$
$\qquad 7+8+9)$
→ Here the surrounding Parentheses () do the continuation implicitly.

(III) color = ['red',
$\qquad$ 'blue',
$\qquad$ 'green']
→ declared using square brackets.

(IV) $a = \{1+2+3+4+5+6+$
$\qquad 7+8+9\}$
→ declared using braces {}.

(V) flag = 2; ropes = 3; pole = 4

→ declared using semicolons (;).

Indentation

- <u>Indentation</u>

- 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 begining of a statement.

- Generally, four whitespaces are used for indentation, and are preffered 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 its 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).