Literals

Literals in Python are constant values that are assigned to variables or used directly in code. Python supports several categories of literals:

String Literals:: Enclosed in single ('...'), double ("..."), triple single ('''...'''), or triple double quotes ("""...""").

Numeric Literals:

1. **Integer Literals**: Whole numbers, which can be written in decimal, binary (0b...), octal (0o...), or hexadecimal (0x...) form.
2. **Float Literals**: Numbers with a decimal point or in exponential (scientific) notation.
3. **Complex Literals**: Numbers with a real and imaginary part, defined by a number followed by a j or J.

Boolean Literals: True and False, which represent the two truth values of Boolean logic.

Special Literal: None, which denotes the absence of a value or a null value.

Collection Literals:Literals for creating collections like lists, tuples, dictionaries, and sets.

·   **List Literals**: Defined using square brackets [].

·   **Tuple Literals**: Defined using parentheses ().

·   **Dictionary Literals**: Defined using curly braces {} with key-value pairs.

·   **Set Literals**: Defined using curly braces {} with comma-separated values.

Variable in Python?

All the data which we create in the program will be saved in some memory location on the system. The data can be anything, an integer, a complex number, a set of mixed values, etc. A Python variable is a symbolic name that is a reference or pointer to an object. Once an object is assigned to a variable, you can refer to the object by that name.

`Python objects – call by object reference`

Assign Multiple Values in multiple variables in single line:-

Many Values to Multiple Variables

Example:-

```
x, y, z ="Neeraj","Ravi","Rahul"
print(x)
print(y)
print(z)


# Output
Neeraj
Ravi
Rahul
```

Single Value assigned to Multiple Variables in single line:

Example:-

```
x = y = z ="Cybrom Technology"
print(x)
print(y)
print(z)


# Output
Cybrom Technology
Cybrom Technology
Cybrom Technology
```

Advance Examples:-

Example:-

```
city = ["Bhopal","Indore","Jabalpur"]
x, y, z = city
print(x)
print(y)
print(z)


# Output
Bhopal
Indore
Jabalpur
```

Python Comments

single line comments:--- (# --------------) ctrl+/

Multi-line comments:---(''' ----------

----------"'')

Eval () function in python:---

This is an in-built function available in python, which takes the strings as an input. The strings which we pass to it should, generally, be expressions. The eval() function takes the expression in the form of a string and evaluates it and returns the result.

Examples,

```python
print(eval('10+5'))
print(eval('10-5'))
print(eval('10\*5'))
print(eval('10/5'))
print(eval('10//5'))
print(eval('10%5'))

# Output
15
5
50
2.0
2
0
```

```python
value = eval(input("Enter expression: "))
print(value)

# Output
Enter expression: 5+10
15
```

```python
value = eval(input("Enter expression: "))
print(value)

# Output
Enter expression: 12-2
10
```