Chapter - 21 Python variables and Data types

Lesson Objective

- What is token
- Types of token
- Data types

Skills to be attained : Knowing the variables, values and data types used in a program

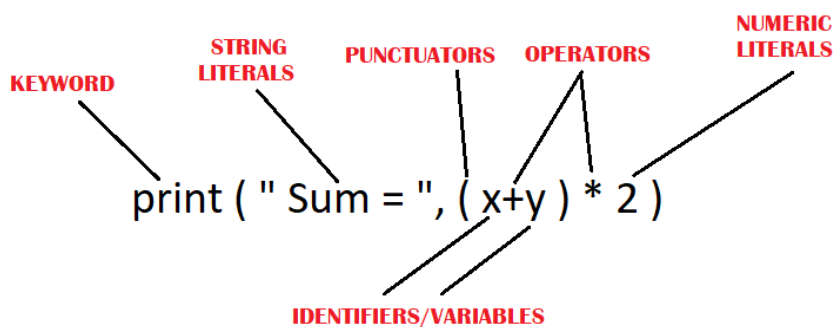**Tools / Websites / Resources : -**

Teacher Led Instruction :

What is token?

Token is an every single unit in the python programme

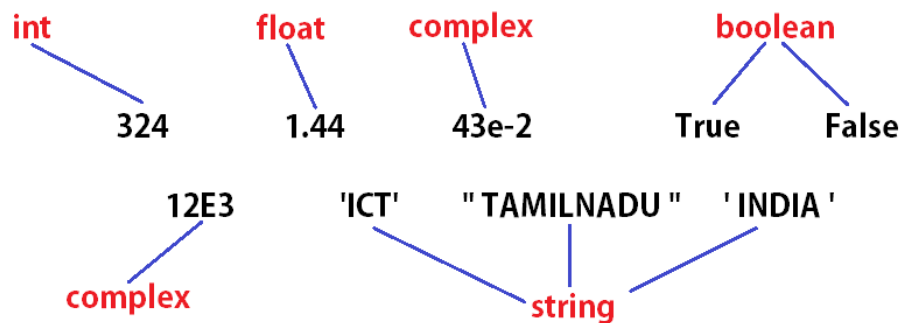There are 5 types of tokens in python which are listed below:

1. **Keywords :** A keyword is a reserved word in a computer language that has a specific meaning such as input, print, if, for, while etc

2. **Identifiers** : Identifiers are name given to Variable such as x, y, temp, add, sub, _a2, _xyz etc.

3. **Literals** : Data values such as strings and numbers such 2, 3.5, "tamil"

4. **Operators :** Operators perform all the calculations such as +, -. *, / and <, >, = etc.

5. **Punctuators :** Punctuators are symbols that are used to structure programming sentences such as . , :, ;, ( ), [ ], { } etc


```
print ( " Sum = ", ( x+y ) * 2 )
```
KEYWORD — STRING LITERALS — PUNCTUATORS — OPERATORS — NUMERIC LITERALS — IDENTIFIERS/VARIABLES

Data types :

Python has several basic data types that are built into the language. With these types, you can represent numeric values, text and Boolean values in your code

- **Numeric data type (234, 2000 : int) (3.5, 0.23 : float)**
- **String data type ("computer", "Tamil")**
- **Boolean values (True and False)**

Student Activities :

Activity 1 : Categorise the following tokens into five types.

{ }, [ ], <, >, *, +, !, if, input, 'Yercaud', "Chennai", 564, ;, " ", 45.32

Activity 2: Name the Tokens of the following statements

name=input ("what is your name : ")
x=10
x>y
sub="python"
print (name," is learning ", sub)
Total=(x+y+z)/3

Activity 3 : Categorise the following data into int, float, string and boolean.

6.7,123,12.0, 12, '343343', 0.009, True, "system", "Keyboard", 1011, 'mouse'

Conclusion : The student should know what are all tokens and what are data types after completing the activities.