

# 5. PYTHON VARIABLES AND OPERATORS

## Learning Objectives

After studying this lesson, students will be able to:

- Appreciate the use of Graphical User Interface (GUI) and Integrated Development Environment (IDE) for creating Python programs.
- Work in Interactive & Script mode for programming.
- Create and assign values to variables.
- Understand the concept and usage of different data types in Python.
- Appreciate the importance and usage of different types of operators (Arithmetic, Relational and Logical)
- Creating Python expression (s) and statement (s).

## Important Notes

- ❖ It is a general purpose programming language which can be used for both scientific and non-scientific programming.
- ❖ It is a platform independent programming language.
- ❖ The programs written in Python are easily readable and understandable.
- ❖ In Python, programs can be written in two ways namely **Interactive mode** and **Script mode**.
- ❖ The **input()** function helps to enter data at run time by the user

- ❖ The output function **print()** is used to display the result of the program on the screen after execution.
- ❖ **Comma ( , )** is used as a separator in **print ( )** to print more than one item.
- ❖ In Python, comments begin with hash symbol (#).
  - I. *# It is Single line Comment*
  - II. *# It is multiline comment*  
*which contains more than one line #*
- ❖ Python breaks each logical line into a sequence of elementary lexical components known as **Tokens**.
- ❖ **Keywords** are special words used by Python interpreter to recognize the structure of program.
- ❖ In computer programming languages operators are special symbols which represent computations, conditional matching etc.
- ❖ The value of an operator used is called **operands**.
- ❖ Ternary operator is also known as conditional operators that evaluate something based on a condition being true or false.
- ❖ Python uses the symbols and symbol combinations as delimiters in expressions, lists, dictionaries and strings.
- ❖ Literal is a raw data given in a variable or constant.

- ❖ Integer Data can be decimal, octal or hexadecimal. Octal integer use **O** (both upper and lower case) to denote octal digits and hexadecimal integer use **OX** (both upper and lower case) and **L** (only upper case) to denote long integer.
- ❖ A floating point data is represented by a sequence of decimal digits that includes a decimal point.
- ❖ A Boolean data can have any of the two values: True or False.
- ❖ String data can be enclosed with single quote or double quote or triple quote.