

Chapter 01 :-

Introduction to python programming

• Python Variables:

✓ A variable in programming is used to store data (values).

⇒ For example:-

a = 10

b = 1.1

Rules for Naming a Variable:

A variable name consists of alphabets (a to z) and (A to Z), digits (0 to 9) or an underscore - .
You can't start a variable name with a digit
Use underscore if you want to create a variable name having two or more words.

- Python Literals:-

Literal is raw data used for representing fixed value.

For example:-

number = 5.5

Here, number is a variable and 5.5 is a literal.

- Python comment:-

In programming, a comment is used to describe what's going on inside

This is a comment

a = "Hello" # a contains "Hello"

Take input from the user:-

To take input from the user and store it in a variable, we use input () function.

```
name = input("Enter name")
```

```
print("Hello", name)
```

```
# Out put
```

```
# Enter name: Jack
```

```
# Hello Jack
```


What is an Operator:-

An operator is a special symbol that carries out arithmetic or logical computation.

For example,

```
a = 5
```

```
sum = a + 10
```

```
print(sum)
```

```
# Output : 15
```

Arithmetic Operators:-

Arithmetic operators are used to perform mathematical operations like addition, subtraction, multiplication etc.

Assignment Operators:-

We have used = operators numerous times up until now. It is an assignment operator.

Assignment operator is used in python to assign values to variables.

For example:-

```
a = 5
```

```
name = "Jack Smith"
```

Here we have assigned 5 to the variable "a". Similarly, we have assigned "Jack Smith" string to the variable name.

MORE ASSIGNMENT OPERATORS:-

Operator

Example

Equivalent to

$+=$

$x += 5$

$x = x + 5$

$-=$

$x -= 5$

$x = x - 5$

$*=$

$x *= 5$

$x = x * 5$

$/=$

$x /= 5$

$x = x / 5$

$\%=$

$x \% 5 = 5$

$x = x \% 5$

$//=$

$x // 5 = 5$

$x = x // 5$

$**=$

$x ** 5 = 5$

$x = x ** 5$

Operator precedence list :-

The operator precedence in python is listed below from higher order to lower order.

()

**

+x, -x

*, /, //, %

+, -

Python Comparison operators:-

Comparison operators are used to compare two values-

Operator	Name	Example
<code>==</code>	Equal	<code>x == y</code>
<code>!=</code>	Not equal	<code>x != y</code>
<code>></code>	Greater than	<code>x > y</code>
<code><</code>	less than	<code>x < y</code>
<code>>=</code>	greater than equals to	<code>x >= y</code>
<code><=</code>	less than or equal to	<code>x <= y</code>

Python Logical operators:-

Logical operators are used to combine conditional statement.

Operator	Description	Example
<code>and</code>	Returns True if both statements are true	<code>x < 5 and x < 10.</code>