**Python**

Python is a powerful programming language ideal for scripting and rapid application development. It is used in web development (like: Django and Bottle), scientific and mathematical computing (Orange, SymPy, NumPy) to desktop graphical user Interfaces (Pygame, Panda3D).

**Python Basics**

**x = 14**

**y = 4**

**# Add two operands**

**print('x + y =', x+y) # Output: x + y = 18**

**# Subtract right operand from the left**

**print('x - y =', x-y) # Output: x - y = 10**

**# Multiply two operands**

**print('x \* y =', x\*y) # Output: x \* y = 56**

**# Divide left operand by the right one**

**print('x / y =', x/y) # Output: x / y = 3.5**

**# Floor division (quotient)**

**print('x // y =', x//y) # Output: x // y = 3**

**# Remainder of the division of left operand by the right**

**print('x % y =', x%y) # Output: x % y = 2**

**# Left operand raised to the power of right (x^y)**

**print('x \*\* y =', x\*\*y) # Output: x \*\* y = 38416**

**Get Input from User**

In Python, you can use input() function to take input from user. For example:

1. inputString = input('Enter a sentence:')
2. print('The inputted string is:', inputString)

When you run the program, the output will be:

Enter a sentence: Hello there.

The inputted string is: Hello there.

**Python Comments**

There are 3 ways of creating comments in Python.

# This is a comment

"""This is a

multiline

comment."""

'''This is also a

multiline

comment.'''

**Type Conversion**

The process of converting the value of one data type (integer, string, float, etc.) to another is called type conversion. Python has two types of type conversion.

**Implicit Type Conversion**

Implicit conversion doesn't need any user involvement. For example:

**num\_int = 123 # integer type**

**num\_flo = 1.23 # float type**

**num\_new = num\_int + num\_flo**

**print("Value of num\_new:",num\_new)**

**print("datatype of num\_new:",type(num\_new))**

**xplicit Conversion**

In case of explicit conversion, you convert the datatype of an object to the required data type. We use predefined functions like int(), float(), str() etc. to perform explicit type conversion. For example:

**num\_int = 123 # int type**

**num\_str = "456" # str type**

**# explicitly converted to int type**

**num\_str = int(num\_str)**

**print(num\_int+num\_str)**