Content 3

**Variables And Datatypes**

**Variable –**Container to store a value

**Keywords –**Reserved words in Python

**Identifiers –**class/function/variable name

##### **Data Types:**

Primarily there are the following data types in Python:

1. Integers
2. Floating point numbers
3. Strings
4. Booleans
5. None

Python is a fantastic language that automatically identifies the type of data for us.

a = 71                                    #Identifies a as class<int>

b = 88.44                              #Identifies b as class<float>

name = “Harry”                  #Identifies name as class<Str>**Rules for defining a variable name:**(Also applicable to other identifiers)

* A variable name can contain alphabets, digits, and underscore.
* A variable name can only start with an alphabet and underscore.
* A variable can’t start with a digit.
* No white space is allowed to be used inside a variable name.

Examples of few valid variable names,

Harry, harry, one8, \_akki, aakash, harry\_bro, etc.

##### **Operators in Python**

The following are some common operators in Python:

1. Arithmetic Operators (+, -, \*, /, etc.)
2. Assignment Operators (=, +=, -=, etc.)
3. Comparison Operators (==, >=, <=, >, <, !=, etc.)
4. Logical Operators (and, or, not)

**type() function and Typecasting**

type function is used to find the data type of a given variable in Python.

a = 31

type(a)                      #class<int>

b = “31”

type(b)                      #class<str>

A number can be converted into a string and vice versa (if possible)

There are many functions to convert one data type into another.

Str(31)           # ”31” Integer to string conversion

int(“32”)       # 32 String to int conversion

float(32)       #32.0 Integer to float conversion

… and so on

Here “31” is a string literal and 31 is a numeric literal.

**input() function**

This function allows the user to take input from the keyboard as a string.

a = input(“Enter name”)               #if a is “harry”, the user entered harry

**Note:**The output of the input function is always a string even if the number is entered by the user.

Suppose if a user enters 34 then this 34 will automatically convert to “34” string literal.