

# Chapter 2

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## Variable & Datatypes

### Variable

A variable is a name given to a memory location in a program.

eg.  $a = 30$   
 $x = \text{"Bishal"}$   
 $y = 71.22$

Variables are the container to store values.

Keywords are the reserved words in python.

### Datatype

Mainly Here are the datatypes in Python:

- i. Integer eg.  $n = 1$
- ii. Floating point numbers eg.  $n = 1.96$
- iii. Strings  $a = \text{"Bishal"}$
- iv. Booleans
- v. None

Python is Awesome Programming language which identifies datatype itself.



## Rules for Naming Variables in Python

- A variable name can contain alphabets, digits & underscores  
eg `a=1`, `bi_sh="Harry"`
- A variable name can only start with an alphabet or underscore
- A variable name can't start with digit
- No white space are allowed on variable name.

Wrong Variable name	Right Variable
<code>1ash="Hi"</code>	<code>ash="Hi"</code>
<code>na me="Hari"</code>	<code>name="Hari"</code>

## Operators in Python

### 1. Arithmetic operators

= `+`, `-`, `*`, `/`, etc

### 2. Assignment operator

= `=`, `+=`, `-=`, etc

### 3. Comparison operator

= `==`, `>`, `<`, `!=`, etc



4. Logical operators: and, or, not

Type function

This function is used to identify the datatype of an variable

eg. `tyre = 1`

`print(type(tyre))`

Output:

Integer i.e. `class <int>`

Convert datatype

In python, a number can be converted to string & vice versa

eg. `float(20) → 20.0 (float)`

`str(39) → "39" (string)`

& many more

Input function (String Input)

This function allows user to take input from the keyboard

eg. `a = "Enter your age"`

Note: The user input always output as an string even user sends or type integer or float