



## 1.Integer (int):

- numerical value with no decimal
- can be neither negative or positive or zero

In [1]:

```
a=10  
print(a)
```

10

In [2]:

```
type(a)           # To check data type : use type() function
```

Out[2]:

int

## 2. Float

- a numerical value with decimal

In [3]:

```
b=3.0  
print(b)
```

3.0

In [4]:

```
type(b)
```

Out[4]:

float

## 3. Boolean (bool)

- True / False

In [5]:

```
b1 = True  
print(b1)
```

True



In [6]:

```
type(b1)
```

Out[6]:

bool

## 5. String (str)

- a combination or sequence of characters (alphabets, numbers, special characters)
- We can use single quotes or double quotes to represent strings.

In [7]:

```
myString1 = 'Hello'  
print(myString1)  
  
myString2 = "Hello"  
print(myString2)  
  
myString3 = '''Hello'''  
print(myString3)
```

Hello  
Hello  
Hello

**Multi-line strings can be denoted using triple quotes, "" or """"**

In [8]:

```
name='''data  
science'''  
  
print(name)
```

data  
science

In [9]:

```
var2 = "123"  
type(var2)
```

Out[9]:

str



In [10]:

```
var1 = 123  
type(var1)
```

Out[10]:

int

### Length of string

In [11]:

```
string = "Hello"  
len(string)
```

Out[11]:

5

### f string

In [12]:

```
num = 12  
name = 'Sam'  
  
print(f"My number is: {num} and my name is: {name}")
```

My number is: 12 and my name is: Sam

### String Concatenation

- Joining of two or more strings into a single one is called concatenation.
- The **+** operator does this in Python. Simply writing two string literals together also concatenates them.
- **Note:** to use **+** operator for strings, compulsory both should be string type only

In [13]:

```
"hello" + "world"
```

Out[13]:

'helloworld'

In [14]:

```
'Hello' + " " + "World"
```

Out[14]:

'Hello World'



In [15]:

```
"siva"+2
```

**TypeError**

Traceback (most recent call last)

t)

Cell In[15], line 1

```
----> 1 "siva"+2
```

**TypeError:** can only concatenate str (not "int") to str

In [16]:

```
"siva" + "2"
```

Out[16]:

```
'siva2'
```

In [17]:

```
"siva" + str(2)
```

Out[17]:

```
'siva2'
```

**Type Casting : Converting from one data type to another data type**

In [18]:

```
int(-4)
```

Out[18]:

```
-4
```

In [19]:

```
float(-4)
```

Out[19]:

```
-4.0
```



In [20]:

```
bool(0.0000000001)
```

Out[20]:

True

In [21]:



```
str(4)
```

Out[21]:

'4'

In [22]:



```
int(4.999)
```

Out[22]:

4

In [23]:



```
float(4.999)
```

Out[23]:

4.999

In [24]:



```
bool(4.99)
```

Out[24]:

True

In [25]:



```
str(4.99)
```

Out[25]:

'4.99'



In [26]:

```
int(True)
```

Out[26]:

1

In [27]:

```
float(True)
```

Out[27]:

1.0

In [28]:

```
float(False)
```

Out[28]:

0.0

In [29]:

```
str(False)
```

Out[29]:

'False'

In [30]:

```
int(False)
```

Out[30]:

0

In [31]:

```
int("srk")
```

**ValueError**

Traceback (most recent call last)

t)

Cell In[31], line 1

----> 1 int("srk")

**ValueError:** invalid literal for int() with base 10: 'srk'



In [32]:

```
int("123")
```

Out[32]:

123

In [33]:



```
float("123")
```

Out[33]:

123.0

In [34]:



```
bool("srk")
```

Out[34]:

True

In [35]:



```
float(int(float("123.45")))
```

Out[35]:

123.0

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