

Data
↓

data types of python

$$2) \frac{3}{2} = 1.5$$

1. Numeric

2. String

3. Boolean

1. Numeric

— integers

— 0, ±1, ±2, ±3, ...

floating

— 4.65

IP FP

Complex

— 4 + 3j

2. String — collection of characters

Alphabets

Number

Symbols

UC

LC

0-9

#, ?, :,

{ 4 }

{ ? }

eg: 'A'
'a'

"
'
" → string

Collection of single characters or multiple characters

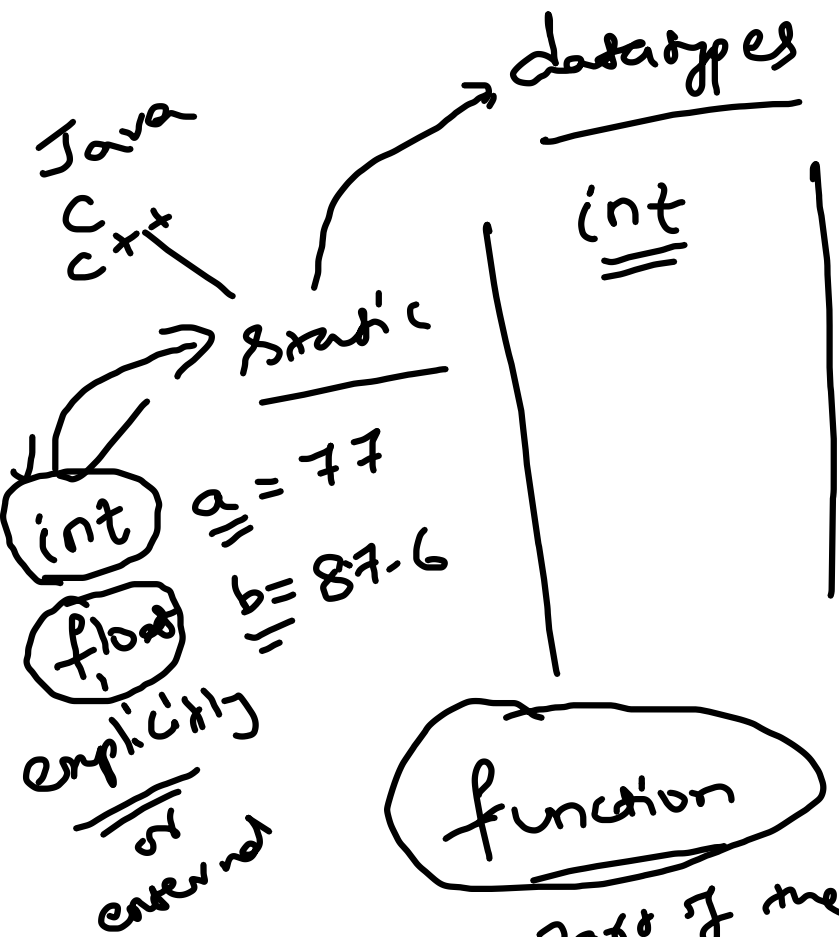
Single line

(a) — string
"ABC123"
"ABC #123"

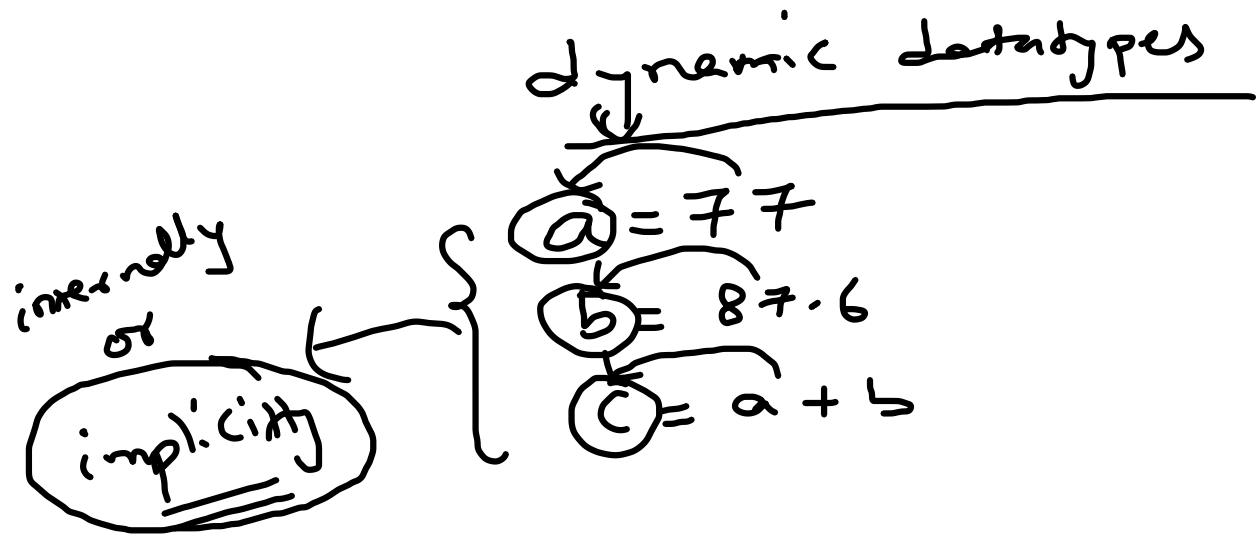
'abc' — string

multiple lines

ABC
123
147



type of data



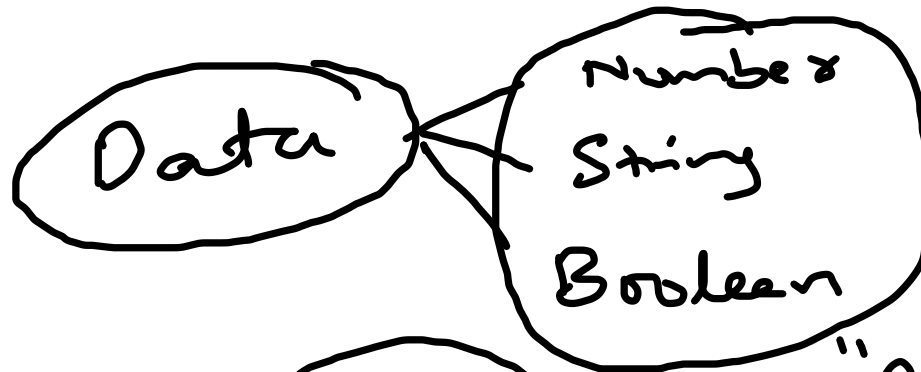
- function
- part of the program
 - performs a task (it may return data)
 - it may or may not return the data.

eg: type(a)

type fn. takes the variable
& returns one variable
data type

3. boolean values

True or False



77

87.6

"ABC"

True

Variable

memory locations

RAM

Name
value
Address

$$77 + 87.6$$

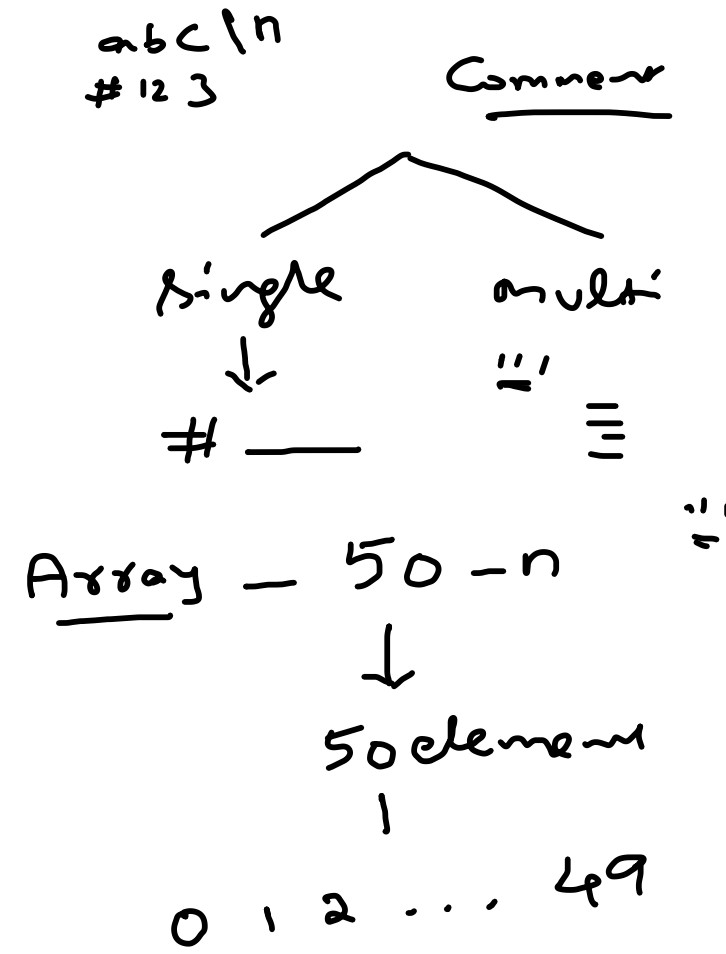
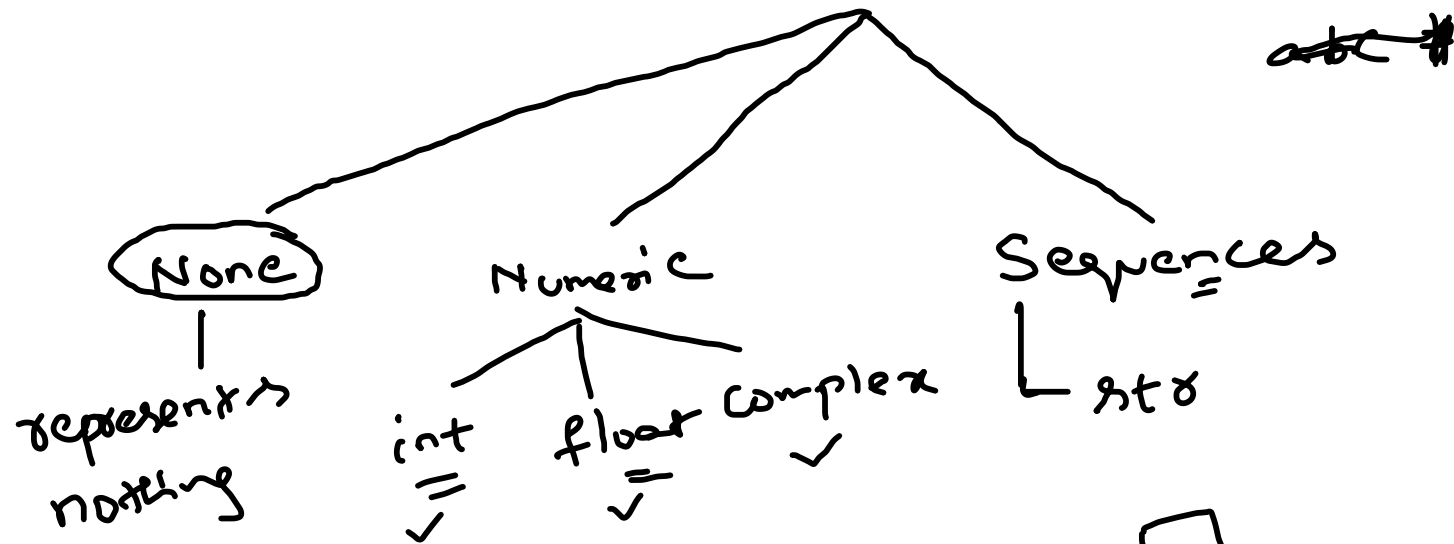
a

assignment op.

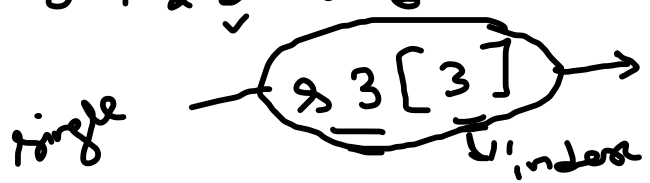
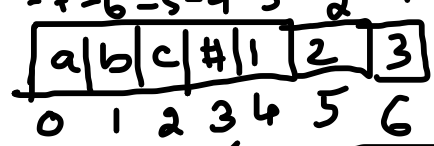
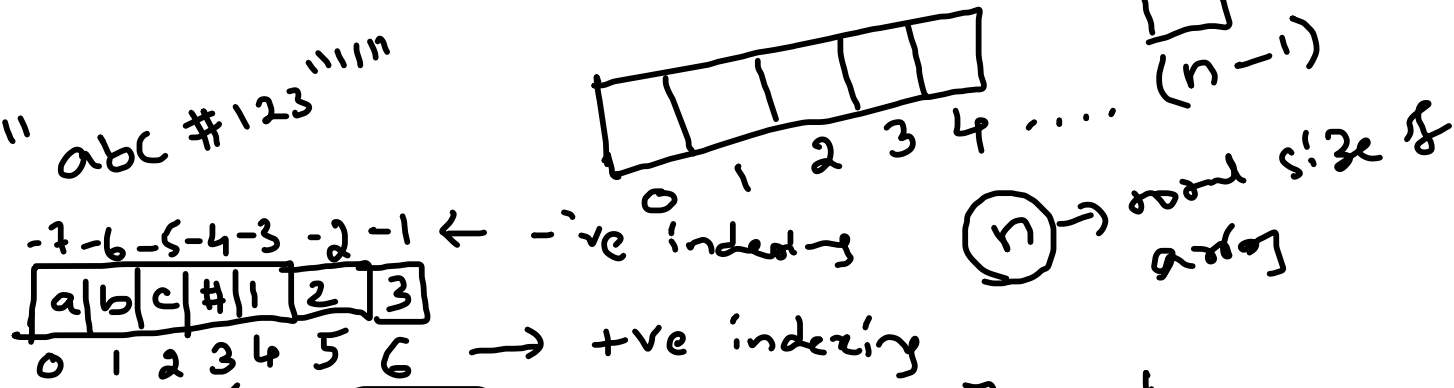
```
a = 77  
b = 87.6  
↓  
a + b
```

Result

Datatypes

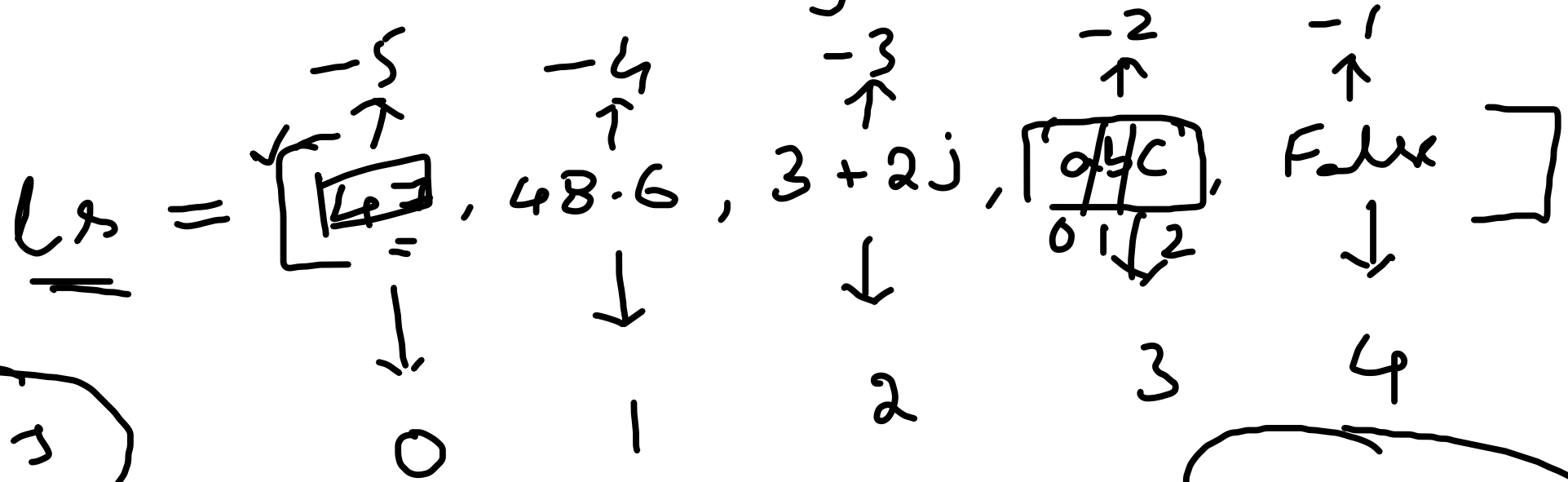


~~abc~~ = "1111" abc #123 "1111"



$3[-3] = 1$

List → Collection of heterogeneous data i.e
it contains any kind of data



Lists are mutable - updated

tuple → similar to list
but is immutable (cannot be updated)

tp = (47, 48.6, 3 + 2j, 'ABC', True)

bytes (homogeneous)

byte array



Sequence

str

list

tuple

bytes

bytearray

list of numbers

from

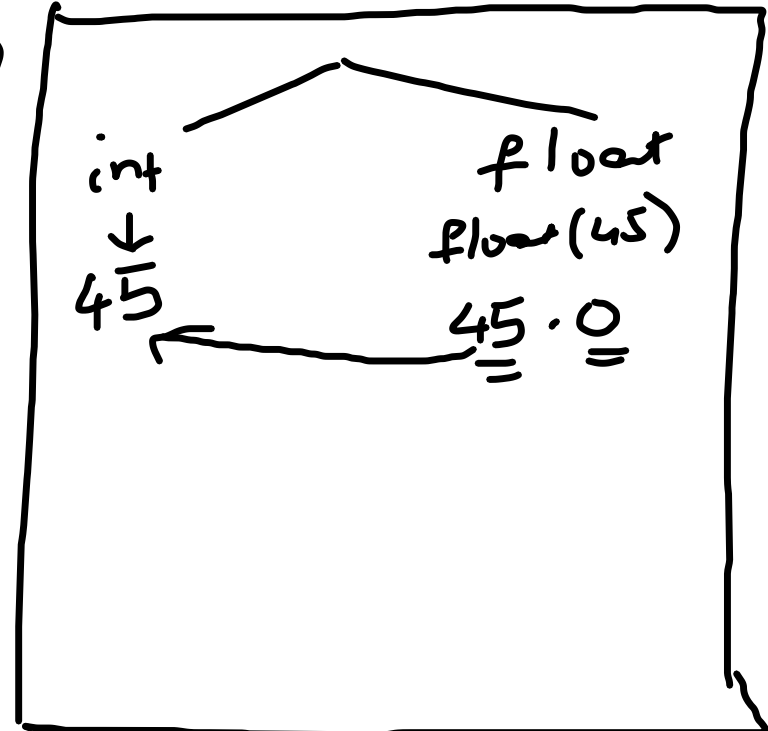
range of 0 to 255

ls = [4, 7, 9, 99]

b = bytes(ls)

explicit conversion

it cannot be updated



it can be updated