Py

Numeric Data Type (bool & complex)

• Boolean and complex are numeric data type

• **Boolean** data is Logical data

• There are useful to write in conditions and relational operations

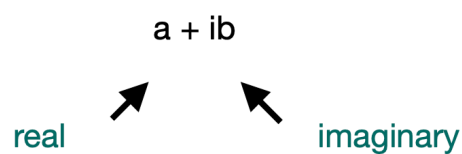• They give result in TRUE / FALSE format where

$$\text{True} - 1$$
$$\text{False} - 0$$

• Example :

```
>>> a=True
>>> a
True
>>> int(a)
1
>>> type(a)
<class 'bool'>
>>>
```

Complex Numbers

• Complex numbers will have real part and imaginary part

• They are mostly used in mathematic

a + ib

real ↗ ↖ imaginary

- Here **i** is the pre- define constant

- In mathematics we know that square root of negative numbers is undefined, lets take an example to understand this

$$25 + \sqrt{-9}$$
$$25 + \sqrt{-1} * 9$$
$$25 + \sqrt{-1} * \sqrt{9}$$
$$25 + \sqrt{-1} \ 3$$
$$25 + i3$$

- If you are developing any application in python which are involving python number then we can use complex datatype

- We can create complex numbers using integer, float value and even functions

X = 3 + 5j   // Integer

x = 3.5 + 5.9j   // float

X = complex(3.5, 5.9)   // function

- Operations like + , - , * , / are also performed on complex numbers