Tuple Intro

Tuple DataType

This is one more datatype in python it is similar to list . The only difference is tuple is immutable and list is mutable .means it is only readable.
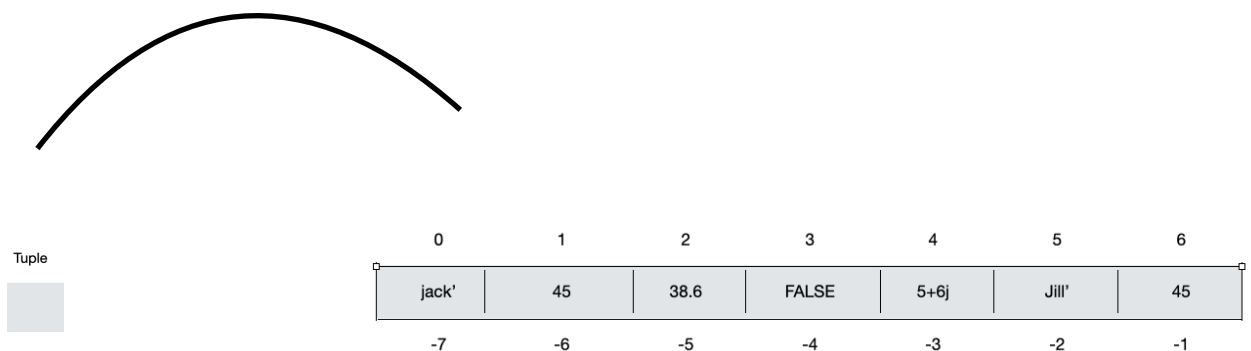
Tuple is collection of elements
Ex: tuple 1=('jack', 45,38.6,false, 5+6j, 'Jill', 45)

Tuple can contain duplicates also.
How to create Tuple
Tuple is enclosed in round brackets
How it looks in memory?

0	1	2	3	4	5	6
jack'	45	38.6	FALSE	5+6j	Jill'	45
-7	-6	-5	-4	-3	-2	-1

Tuple

It looks like an array. So this is an array and every array having its own index
We cannot change anything in tuple tuple does not has append method so, we cannot change the value at a particular and nor increase it.
t1=(1,2,3,4,5)#this is the method of creating a tuple
t1=(10)#single value in a tuple# not valid
t1=(10,) # valid
t1=tuple(1,2,3,4,5)

Program:

```
>>>
>>> t1=('Jack', 38.5, 45, 5+9j, 45)
>>> t1
('Jack', 38.5, 45, (5+9j), 45)
>>> type(t1)
<class 'tuple'>
>>>
>>> t1[2]
45
>>> t1[2]=85
Traceback (most recent call last):
 File "<pyshell#6>", line 1, in <module>
   t1[2]=85
TypeError: 'tuple' object does not support item assignment
>>>
>>> t1=(1,2,3,4,5)
>>> t1
(1, 2, 3, 4, 5)
>>> t2=()
>>> t2
()
>>> type(t2)
<class 'tuple'>
>>>
```

Packing:

t1=10,20, 30,40#giving multiple values what happens ?Let's check.
t1=10
t1
10
type(t1)
<class 'int'>
t1=10,20,30,40# it is called packing
type(t1)
<class 'tuple'>

If we give multiple values it will pack it by giving brackets this is called packing

Unpacking:

t2=(10,20,30,40)
a,b,c,d=t2
t2
(10, 20, 30, 40)
a
10
b
20
c
30
d
40
This is called unpacking
When given values without parenthesis means packing and in contrast given values which are storing them is called unpacking are automatically used in tuple

t1=10,20,30,40
l1=[1,2,3]
type(l1)
<class 'list'>
a,b,c=l1
a
1
b
2
c
3

Unpacking is done for tuple as well as list and string. But packing happens only with tuple