

**Subject** : Introduction to Computing and Problem Solving

**Topic** : Classes and Objects in Python

**Question** : What is Tuple in Python?

**Answer** : In python programming language, the tuple is similar to a list. The main difference between the tuple and list is:

Tuple is “immutable” whereas list is “mutable”. It means that we cannot change the elements of a tuple once it is assigned, whereas in the case of list, we can change the elements in the list after a list creation.

For example:

In python, we can create the list with the help of “[]” square brackets. Tuples are created with the help of “()” parenthesis.

```
>>> list1=[10,20,30]           // list1 is created with three elements.

>>> list1                       // displaying the elements in the list

[10, 20, 30]

>>> list1[1]=50                 // trying to assign a new value '50' in list1[1] position. . i.e. list is mutable

>>> list1

[10, 50, 30]                   // accepted and printed and updated list is printed

>>> tuple1= (10, 20, 30)        // tuple is created with three elements

>>> tuple1                      // displaying the elements in the tuple

(10, 20, 30)

>>> tuple1[1]=50               // trying to assign a new value '50' in tuple1[1] position. . i.e. tuple is immutable
gives error
```

Traceback (most recent call last):

File "<pyshell#7>", line 1, in <module>

tuple1[1]=50

TypeError: 'tuple' object does not support item assignment