

## Python Tuples

- Tuples are immutable ordered collection of items
- Python 3 does not support cmp() function

```
In [1]: name = ('Ashok','Sunita','Arun')
print(name)
```

```
('Ashok', 'Sunita', 'Arun')
```

```
In [3]: #Using tuple() constructor
fruits = tuple(('Guava','Banana','Pear'))
print(fruits)
```

```
('Guava', 'Banana', 'Pear')
```

```
In [13]: #Indexing can be done on tuple items as we did in lists
num = (10,20,30,40)
print(num[2])
print(num[-1])
```

```
30
```

```
40
```

```
In [12]: #Slicing is possible in tuples
num = (10,20,30,40)
n = num[0:2]
x = num[::-1]
p = num[-4:-2]
print(n)
print(x)
print(p)
```

```
(10, 20)
```

```
(40, 30, 20, 10)
```

```
(10, 20)
```

```
In [20]: #Iterating the tuple elements
num = (10,20,30,40)
for x in num:
    print(x,end=' ')
```

```
10 20 30 40
```

```
In [22]: num = (10,20,30,40)
for i in range(len(num)):
    print(num[i])
```

```
10
```

```
20
```

```
30
```

```
40
```

```
In [23]: #count(value) will count the number of occurrence of a tuple element
x = (1,2,1,3,4,5,6,7,3,4,8)
print(x.count(4))
```

```
2
```

```
In [24]: #index(value) will find the positional index of first occurrence of an item
x = (1,2,1,3,4,5,6,7,3,4,8)
print(x.index(3))
```

3

```
In [28]: #max() and min() functions in tuple
x = (10,30,20,50)
print(max(x))
print(min(x))
```

50

10

```
In [31]: #A new tuple created from two tuples
x = (10,30,20,50)
y = (70,80)
z = x+y
print(z)
```

(10, 30, 20, 50, 70, 80)

```
In [32]: x = (10,30,20,50)
y = x*2
print(y)
```

(10, 30, 20, 50, 10, 30, 20, 50)

```
In [36]: #In a tuple having mutable objects, we can change the mutable objects only
x = (10,[1,2,3], 20)
x[1].append(4)
print(x)
```

(10, [1, 2, 3, 4], 20)

```
In [40]: # A program to create a multiplication table of a number and store in a tuple
li = list()
num = int(input('Enter a number:'))
for i in range(1,11):
    li.append(num*i)
tup = tuple(li)
print(tup)
```

Enter a number:10

(10, 20, 30, 40, 50, 60, 70, 80, 90, 100)