

28th sep

# Tuple

Tuple is immutable

Tuple is defined by using () brackets

```
In [1]: t=()  
t
```

```
Out[1]: ()
```

```
In [2]: t1=(10,2.6,True,'nit',10+7j)  
t1
```

```
Out[2]: (10, 2.6, True, 'nit', (10+7j))
```

```
In [3]: len(t1)
```

```
Out[3]: 5
```

## Tuple using count function

```
In [7]: t1.count(2.6)
```

```
Out[7]: 1
```

```
In [5]: t1.count('nit')
```

```
Out[5]: 1
```

```
In [8]: t1.index(2.6)
```

```
Out[8]: 1
```

```
In [10]: t1(10)==True
```

```
-----  
TypeError                                Traceback (most recent call last)  
Cell In[10], line 1  
----> 1 t1(10)==True  
  
TypeError: 'tuple' object is not callable
```

```
In [11]: t1
```

```
Out[11]: (10, 2.6, True, 'nit', (10+7j))
```

```
In [12]: t1[:]
```

```
Out[12]: (10, 2.6, True, 'nit', (10+7j))
```

```
In [13]: t1[1:4]
```

```
Out[13]: (2.6, True, 'nit')
```

```
In [14]: t1[-4:-1]
```

```
Out[14]: (2.6, True, 'nit')
```

```
In [15]: t1
```

```
Out[15]: (10, 2.6, True, 'nit', (10+7j))
```

```
In [16]: t1[3][1]
```

```
Out[16]: 'i'
```

```
In [20]: print(t1[3][0])  
print(t1[3][1])  
print(t1[3][2])
```

```
n  
i  
t
```

```
In [21]: for i in t1:  
         print(i)
```

```
10  
2.6  
True  
nit  
(10+7j)
```

```
In [22]: for i in enumerate (t1):  
         print(i)
```

```
(0, 10)  
(1, 2.6)  
(2, True)  
(3, 'nit')  
(4, (10+7j))
```

```
In [23]: t
```

```
Out[23]: ()
```

```
In [24]: t1
```

```
Out[24]: (10, 2.6, True, 'nit', (10+7j))
```

```
In [27]: #tuple by using index function
```

```
In [25]: t1.index(True)
```

```
Out[25]: 2
```

```
In [26]: t1.index('nit')
```

```
Out[26]: 3
```

```
In [ ]:
```

```
In [28]: t1.clear()
```

```
-----  
AttributeError                                Traceback (most recent call last)  
Cell In[28], line 1  
----> 1 t1.clear()  
  
AttributeError: 'tuple' object has no attribute 'clear'
```

```
In [29]: t3=t1*2
```

```
In [30]: t3
```

```
Out[30]: (10, 2.6, True, 'nit', (10+7j), 10, 2.6, True, 'nit', (10+7j))
```

```
In [31]: t1
```

```
Out[31]: (10, 2.6, True, 'nit', (10+7j))
```

```
In [32]: t1.sort()
```

```
-----  
AttributeError                                Traceback (most recent call last)  
Cell In[32], line 1  
----> 1 t1.sort()  
  
AttributeError: 'tuple' object has no attribute 'sort'
```

```
In [33]: sorted(t1)
```

```
-----  
TypeError                                    Traceback (most recent call last)  
Cell In[33], line 1  
----> 1 sorted(t1)  
  
TypeError: '<' not supported between instances of 'str' and 'bool'
```

```
In [34]: t5=(90,80,20,25,400,10)  
         t5
```

Out[34]: (90, 80, 20, 25, 400, 10)

In [35]: sorted(t5)

Out[35]: [10, 20, 25, 80, 90, 400]

In [36]: sorted(t5 reverse=True)

```
Cell In[36], line 1
      sorted(t5 reverse=True)
      ^
```

**SyntaxError:** invalid syntax. Perhaps you forgot a comma?

In [37]: sorted(t5, reverse=True)

Out[37]: [400, 90, 80, 25, 20, 10]

In [ ]:

In [39]: t5.remove()  
t5

```
-----
AttributeError                                Traceback (most recent call last)
Cell In[39], line 1
----> 1 t5.remove()
      2 t5
```

**AttributeError:** 'tuple' object has no attribute 'remove'

In [ ]:

In [40]: t5.append(50)

```
-----
AttributeError                                Traceback (most recent call last)
Cell In[40], line 1
----> 1 t5.append(50)
```

**AttributeError:** 'tuple' object has no attribute 'append'

In [ ]:

In [38]: t6=(10,10,20,30)  
t6

Out[38]: (10, 10, 20, 30)

## duplicates are allowed in tuple