

Tuple

```
In [26]: tup1 = () # empty Tuple  
tup1
```

```
Out[26]: ()
```

```
In [28]: tup2 = (10,20,30) #integere number  
tup2
```

```
Out[28]: (10, 20, 30)
```

```
In [30]: tup3 = (10.22, 22.0, 33.0) #float number  
tup3
```

```
Out[30]: (10.22, 22.0, 33.0)
```

```
In [32]: tup4 = ('one','two','three','four') # string  
tup4
```

```
Out[32]: ('one', 'two', 'three', 'four')
```

```
In [34]: tup5 = ('harshada',25,(40,30,40),(19,90)) # nested tuple  
tup5
```

```
Out[34]: ('harshada', 25, (40, 30, 40), (19, 90))
```

```
In [36]: tup6 = (100,'harshada',20.3) # mixed data types  
tup6
```

```
Out[36]: (100, 'harshada', 20.3)
```

```
In [38]: len(tup6) #Length of tuple
```

```
Out[38]: 3
```

Tuple Indexing

```
In [40]: tup2[0] # retrieve first elemnt of the tuple
```

```
Out[40]: 10
```

```
In [42]: tup4[-1]
```

```
Out[42]: 'four'
```

Tuple slicing

```
In [46]: mytuple = (1,2,3,4,5,6,7,8)  
mytuple
```

```
Out[46]: (1, 2, 3, 4, 5, 6, 7, 8)
```

```
In [50]: mytuple[0:3]
```

```
Out[50]: (1, 2, 3)
```

```
In [52]: mytuple[:3]
```

```
Out[52]: (1, 2, 3)
```

```
In [54]: mytuple[2:]
```

```
Out[54]: (3, 4, 5, 6, 7, 8)
```

```
In [56]: mytuple[-3]
```

```
Out[56]: 6
```

```
In [58]: mytuple[:]
```

```
Out[58]: (1, 2, 3, 4, 5, 6, 7, 8)
```

```
In [60]: del mytuple[0] # tuple is immutable so we cant delete items
```

```
-----  
TypeError                                Traceback (most recent call last)  
Cell In[60], line 1  
----> 1 del mytuple[0]  
  
TypeError: 'tuple' object doesn't support item deletion
```

```
In [62]: for i in mytuple:  
         print(i)
```

```
1  
2  
3  
4  
5  
6  
7  
8
```

```
In [66]: for i in enumerate(mytuple):  
         print(i)
```

```
(0, 1)  
(1, 2)  
(2, 3)  
(3, 4)  
(4, 5)  
(5, 6)  
(6, 7)  
(7, 8)
```

```
In [70]: mytuple
```

```
Out[70]: (1, 2, 3, 4, 5, 6, 7, 8)
```

```
In [72]: mytuple.index(1) # index of first element equal to 1
```

Out[72]: 0

Sorting

```
In [76]: mytuple2 = (33,44,55,66)
         mytuple2
```

Out[76]: (33, 44, 55, 66)

```
In [78]: sorted(mytuple2)
```

Out[78]: [33, 44, 55, 66]

```
In [82]: sorted(mytuple2, reverse= True) #descending Order
```

Out[82]: [66, 55, 44, 33]

```
In [ ]:
```