

Tuple Creation

```
In [1]: t1 = () # Empty Tuple
```

```
t2 = (10,20,30)
```

```
In [3]: t3 = (10.23,30,45,50.6)
```

```
In [4]: t4 = ('one','two','three')
```

```
In [5]: t5 = ('prasad',40,(50,60),(70,90))
```

```
In [6]: t6 = (10,'prasad',40.65)
```

```
In [7]: t7 = ('prasad',50,[40,59],[70,90],{'John','harif'},(10,30,45))
```

```
In [8]: len(t7)
```

```
Out[8]: 5
```

Tuple Indexing

```
In [9]: t2[0]
```

```
Out[9]: 10
```

```
In [10]: t3[1]
```

```
Out[10]: 30
```

```
In [11]: t4[0][0]
```

```
Out[11]: 'o'
```

```
In [12]: t4[-1]
```

```
Out[12]: 'three'
```

```
In [13]: mytup = ('one','two','three','four','five','six','seven','eight')
```

```
In [15]: mytup[0:4]
```

```
Out[15]: ('one', 'two', 'three', 'four')
```

```
In [17]: mytup[2:6]
```

```
Out[17]: ('three', 'four', 'five', 'six')
```

```
In [18]: mytup[:5]
```

```
Out[18]: ('one', 'two', 'three', 'four', 'five')
```

```
In [19]: mytup[-3:]
```

```
Out[19]: ('six', 'seven', 'eight')
```

```
In [20]: mytup[-1]
```

```
Out[20]: 'eight'
```

```
In [21]: mytup[:]
```

```
Out[21]: ('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight')
```

Remove & Change Items

```
In [22]: mytup
```

```
Out[22]: ('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight')
```

```
In [23]: del mytup[0]
```

```
-----  
TypeError                                Traceback (most recent call last)  
Cell In[23], line 1  
----> 1 del mytup[0]  
  
TypeError: 'tuple' object doesn't support item deletion
```

```
In [24]: mytup[0] = 1
```

```
-----  
TypeError                                Traceback (most recent call last)  
Cell In[24], line 1  
----> 1 mytup[0] = 1  
  
TypeError: 'tuple' object does not support item assignment
```

```
In [25]: del mytup
```

```
In [26]: mytup
```

```
-----  
NameError                                Traceback (most recent call last)  
Cell In[26], line 1  
----> 1 mytup  
  
NameError: name 'mytup' is not defined
```

```
In [27]: mytup1 = ('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight')
```

```
In [28]: mytup1
```

```
Out[28]: ('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight')
```

```
In [29]: for i in mytup1:  
        print(i)
```

```
one  
two  
three  
four  
five  
six  
seven  
eight
```

```
In [30]: for i in enumerate(mytup1):  
        print(i)
```

```
(0, 'one')  
(1, 'two')  
(2, 'three')  
(3, 'four')  
(4, 'five')  
(5, 'six')  
(6, 'seven')  
(7, 'eight')
```

Tuple Membership

```
In [31]: mytup1
```

```
Out[31]: ('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight')
```

```
In [32]: 'one' in mytup1
```

```
Out[32]: True
```

```
In [33]: 'five' in mytup1
```

```
Out[33]: True
```

```
In [34]: 'ten' in mytup1
```

```
Out[34]: False
```

Index Position

```
In [35]: mytup1
```

```
Out[35]: ('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight')
```

```
In [36]: mytup1.index('three')
```

```
Out[36]: 2
```

```
In [38]: mytup1.index('eight')
```

Out[38]: 7

Sorting

In [40]: `mytup2 = (10,30,5,2,70,40)`

In [41]: `sorted(mytup2)`

Out[41]: [2, 5, 10, 30, 40, 70]

In [42]: `sorted(mytup2, reverse=True)`

Out[42]: [70, 40, 30, 10, 5, 2]

In []:

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