

```
In [3]: tup1 = ()  
tup1
```

```
Out[3]: ()
```

```
In [5]: tup2 = (10, 30, 60)  
tup2
```

```
Out[5]: (10, 30, 60)
```

```
In [7]: tup3 = (20.5, 12.68, 33.45)  
tup3
```

```
Out[7]: (20.5, 12.68, 33.45)
```

```
In [11]: tup4 = ('Shafiq', 'Shafaqat', 'Yaqoob')  
tup4
```

```
Out[11]: ('Shafiq', 'Shafaqat', 'Yaqoob')
```

```
In [13]: tup5 = ('Aqueel', 50, (50, 75), (80, 90))  
tup5
```

```
Out[13]: ('Aqueel', 50, (50, 75), (80, 90))
```

```
In [15]: tup6 = ('Shafiq', 55, 30.68)  
tup6
```

```
Out[15]: ('Shafiq', 55, 30.68)
```

```
In [17]: tup7 = ('Shafiq', 24, [25, 70], [66, 34], {'John', 'David'}, (87, 63, 25))  
tup7
```

```
Out[17]: ('Shafiq', 24, [25, 70], [66, 34], {'David', 'John'}, (87, 63, 25))
```

```
In [19]: len(tup7)
```

```
Out[19]: 6
```

Tuple Indexing

```
In [21]: tup2[0]
```

```
Out[21]: 10
```

```
In [23]: tup4[0]
```

```
Out[23]: 'Shafiq'
```

```
In [25]: tup4[0][0]
```

```
Out[25]: 'S'
```

```
In [27]: tup4[0][2]
```

```
Out[27]: 'a'
```

```
In [29]: tup4[-1]
```

```
Out[29]: 'Yaqoob'
```

Slicing

```
In [33]: mytuple = ('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight')
```

```
In [37]: mytuple[0:4]
```

```
Out[37]: ('one', 'two', 'three', 'four')
```

```
In [39]: mytuple[3: 7]
```

```
Out[39]: ('four', 'five', 'six', 'seven')
```

```
In [41]: mytuple[:5]
```

```
Out[41]: ('one', 'two', 'three', 'four', 'five')
```

```
In [57]: mytuple[:3]
```

```
Out[57]: ('one', 'two', 'three')
```

```
In [47]: mytuple[-3:]
```

```
Out[47]: ('six', 'seven', 'eight')
```

```
In [51]: mytuple[-7]
```

```
Out[51]: 'two'
```

```
In [71]: mytuple = ('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight')
```

```
In [74]: del mytuple[3]
```

```
-----  
TypeError                                Traceback (most recent call last)  
Cell In[74], line 1  
----> 1 del mytuple[3]  
  
TypeError: 'tuple' object doesn't support item deletion
```

```
In [76]: mytuple[1] = 0
```

```
-----  
TypeError                                Traceback (most recent call last)  
Cell In[76], line 1  
----> 1 mytuple[1] = 0  
  
TypeError: 'tuple' object does not support item assignment
```

```
In [78]: mytuple = ('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight')
```

```
In [80]: for i in mytuple:  
         print(i)
```

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

```
In [82]: for i in enumerate(mytuple):  
         print(i)
```

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

```
In [84]: mytuple = ('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight')
```

```
In [88]: 'one' in mytuple
```

```
Out[88]: True
```

```
In [90]: 'five' in mytuple
```

```
Out[90]: True
```

```
In [98]: if 'one' in mytuple:  
         print("one is present in tuple")  
  
         else:  
             print("one is present in tuple")
```

```
one is present in tuple
```

```
In [100... if 'eleven' in mytuple:  
          print("eleven is present in tuple")  
  
          else:  
              print("eleven is not present in tuple")
```

```
eleven is not present in tuple
```

```
In [104... mytuple.index('one')
```

```
Out[104... 0
```

```
In [108... mytuple1 = ('one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight')
```

```
In [110... mytuple1.index('three')
```

Out[110...] 2

In [112...] mytuple2 = (45, 78, 54, 67, 96, 12, 11)

In [119...] sorted(mytuple2)

Out[119...] [11, 12, 45, 54, 67, 78, 96]

In [120...] sorted(mytuple2, reverse = True)

Out[120...] [96, 78, 67, 54, 45, 12, 11]

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