

Tuple and Range

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

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

```
In [2]: type(t)
```

```
Out[2]: tuple
```

```
In [3]: t = (10, 20, 30)  
t
```

```
Out[3]: (10, 20, 30)
```

```
In [5]: len(t)
```

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

```
In [6]: t1 = (10, 2.3, 'nit', 1+2j, True, 10, 20)
```

```
In [7]: t1
```

```
Out[7]: (10, 2.3, 'nit', (1+2j), True, 10, 20)
```

```
In [8]: print(t)  
print(t1)
```

```
(10, 20, 30)  
(10, 2.3, 'nit', (1+2j), True, 10, 20)
```

```
In [9]: t.count(10)
```

```
Out[9]: 1
```

```
In [10]: t1.count(10)
```

```
Out[10]: 2
```

```
In [11]: t1.count(2.3)
```

```
Out[11]: 1
```

```
In [12]: t1.index(2.3)
```

```
Out[12]: 1
```

```
In [13]: t[0]
```

```
Out[13]: 10
```

```
In [14]: t[0] = 100 #Because it is immutable
```

```
-----  
TypeError                                Traceback (most recent call last)  
Cell In[14], line 1  
----> 1 t[0] = 100  
  
TypeError: 'tuple' object does not support item assignment
```

```
In [15]: t2 = t*3  
t2
```

```
Out[15]: (10, 20, 30, 10, 20, 30, 10, 20, 30)
```

```
In [16]: t1
```

```
Out[16]: (10, 2.3, 'nit', (1+2j), True, 10, 20)
```

```
In [17]: t1[1:6]
```

```
Out[17]: (2.3, 'nit', (1+2j), True, 10)
```

```
In [18]: t2[1:6:3]
```

Out[18]: (20, 20)

```
In [19]: t2[1:6:5]
```

Out[19]: (20,)

```
In [20]: t1
```

Out[20]: (10, 2.3, 'nit', (1+2j), True, 10, 20)

```
In [21]: t1[:]
```

Out[21]: (10, 2.3, 'nit', (1+2j), True, 10, 20)

```
In [22]: t1[::-1]
```

Out[22]: (20, 10, True, (1+2j), 'nit', 2.3, 10)

```
In [23]: t1[::-2]
```

Out[23]: (20, True, 'nit', 10)

```
In [24]: t1[::-2]
```

Out[24]: (10, 'nit', True, 20)

```
In [25]: for i in t:
         print(t)
```

(10, 20, 30)

(10, 20, 30)

(10, 20, 30)

```
In [28]: for i in enumerate(t1):
         print(i)
```

```
(0, 10)
(1, 2.3)
(2, 'nit')
(3, (1+2j))
(4, True)
(5, 10)
(6, 20)
```

```
In [ ]: # Tuple Completed
```

Range

```
In [29]: range()
```

```
-----
TypeError                                Traceback (most recent call last)
Cell In[29], line 1
----> 1 range()

TypeError: range expected at least 1 argument, got 0
```

```
In [30]: range(0,5)
```

```
Out[30]: range(0, 5)
```

```
In [31]: list(range(5))
```

```
Out[31]: [0, 1, 2, 3, 4]
```

```
In [32]: list(range(10,20))
```

```
Out[32]: [10, 11, 12, 13, 14, 15, 16, 17, 18, 19]
```

```
In [33]: range(10,50,5)
```

```
Out[33]: range(10, 50, 5)
```

```
In [34]: list(range(10,50,5))
```

Out[34]: [10, 15, 20, 25, 30, 35, 40, 45]

In []: