

----- tuple ----- is immutable

```
In [14]: t=()
```

```
In [15]: type(t)
```

```
Out[15]: tuple
```

```
In [16]: t= (10,20,30)
t
```

```
Out[16]: (10, 20, 30)
```

```
In [17]: t.count(20)
```

```
Out[17]: 1
```

```
In [18]: t1=(20,23.4,'ten',1+2j)
t1
```

```
Out[18]: (20, 23.4, 'ten', (1+2j))
```

```
In [19]: t1.index(20)
```

```
Out[19]: 0
```

```
In [20]: print(t)
print(t1)
```

```
(10, 20, 30)
(20, 23.4, 'ten', (1+2j))
```

```
In [21]: print(len(t))
print(len(t1))
```

```
3
4
```

```
In [22]: #----- tuple is immutable
# cannot change or edit
```

```
In [23]: bank_account=('adhar',2334,55)
bank_account
```

```
Out[23]: ('adhar', 2334, 55)
```

```
In [24]: bank_account[0]='ten'
```

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

```
In [30]: t=(10,20,30,40)  
        t2=t*3    # 3 list repeats 3 times
```

```
In [31]: t2
```

```
Out[31]: (10, 20, 30, 40, 10, 20, 30, 40, 10, 20, 30, 40)
```

```
In [36]: 0 in t2
```

```
Out[36]: False
```

```
In [37]: 20 in t2
```

```
Out[37]: True
```

```
In [39]: all(t2)
```

```
Out[39]: True
```

```
In [40]: any(t2)
```

```
Out[40]: True
```

```
In [41]: t3=(20,40,0)
```

```
In [43]: all(t3)
```

```
Out[43]: False
```

```
In [44]: any(t3)
```

```
Out[44]: True
```

```
In [49]: T=tuple('aruna')  
        T
```

```
Out[49]: ('a', 'r', 'u', 'n', 'a')
```

```
In [51]: t=(1,2,3,4)  
        t
```

```
Out[51]: (1, 2, 3, 4)
```