

## ✓ TUPLES

```
t = ()

t = (1,2,3,4)

t1=(0.4,4.5,8.9)

t2=('one','two','three')

t3=('one',1,2,3,(50,100),1.45)

len(t3)

6
```

## ✓ TUPLE INDEXING

```
t

(1, 2, 3, 4)

t[0]

1

t3[4][1]

100

t[-1]

4
```

## ✓ TUPLE SLICING

```
t

(1, 2, 3, 4)

t = (1,2,32,3,4,5,5,5,5,58)

t[0:3] # items from 0 to 2

(1, 2, 32)

t[3:8]

(3, 4, 5, 5, 5)

t[:4] #elements from 0 to 3

(1, 2, 32, 3)

t[-4:] #last 4 elements

(5, 5, 5, 58)
```

```
t[-1] #last element
```

```
58
```

## Remove and change items

```
t
```

```
(1, 2, 32, 3, 4, 5, 5, 5, 5, 58)
```

```
del t
```

```
t
```

```
-----
NameError                                Traceback (most recent call last)
<ipython-input-22-cb2d59b86967> in <cell line: 2>()
      1 del t
----> 2 t

NameError: name 't' is not defined
```

## LOOPING

```
t = (1,2,3,4,5,6,7,8,9)
```

```
for i in t:
    print(i)
print('*****')
for i in enumerate(t):
    print(i)
```

```
1
2
3
4
5
6
7
8
9
*****
(0, 1)
(1, 2)
(2, 3)
(3, 4)
(4, 5)
(5, 6)
(6, 7)
(7, 8)
(8, 9)
```

## COUNTING

```
t.count(1)
```

```
1
```

## Membership

```
1 in t
```

```
True
```

## Index position

```
t
```

```
(1, 2, 3, 4, 5, 6, 7, 8, 9)
```

```
t.index(1)
```

```
0
```

## ✓ SORTING

```
t
```

```
(1, 2, 3, 4, 5, 6, 7, 8, 9)
```

```
t = (6,7,3,5,1,4,5,5,77,0)
```

```
t
```

```
(6, 7, 3, 5, 1, 4, 5, 5, 77, 0)
```

```
sorted(t)
```

```
[0, 1, 3, 4, 5, 5, 5, 6, 7, 77]
```