- how to display
- reversed
- len
- type
- max
- min
- sum
- sorted
- in
- not in
- mutable
- index
- find
- slice
- concatination
- methods

```
In [1]:  tuple1=(1,2,3,4,4)
```

```
In [2]:  #type
         tuple1=(1,2,3,4,4)
         type(tuple1)
```

Out[2]: tuple

```
In [3]:  #len
         tuple1=(1,2,3,4,4)
         len(tuple1)
```

Out[3]: 5

```
In [4]:  #max
         tuple1=(1,2,3,4,4)
         max(tuple1)
```

Out[4]: 4

```
In [5]:  #min
         tuple1=(1,2,3,4,4)
         min(tuple1)
```

Out[5]: 1

```
In [7]:  #sum
         tuple1=(1,2,3,4,4)
         tuple2=('a','b','c',20,40)
```

```
tuple3=tuple1+tuple2
tuple3
```

Out[7]: (1, 2, 3, 4, 4, 'a', 'b', 'c', 20, 40)

In [10]:
```
#short
tuple3=(1, 2, 3, 4, 4, 20, 40)
sorted(tuple3)
tuple3
```

Out[10]: (1, 2, 3, 4, 4, 20, 40)

In [11]:
```
#in
tuple3=(1, 2, 3, 4, 4, 20, 40)
4 in tuple3
```

Out[11]: True

In [12]:
```
#not in
tuple3=(1, 2, 3, 4, 4, 20, 40)
4 not in tuple3
```

Out[12]: False

In [14]:
```
#immutable-imutable
tuple3=(1, 2, 3, 4, 4, 20, 40)
tuple3[4]=30
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[14], line 2
      1 tuple3=(1, 2, 3, 4, 4, 20, 40)
----> 2 tuple3[4]=30

TypeError: 'tuple' object does not support item assignment
```

In [17]:
```
#index
tuple3=(1, 2, 3, 4, 4, 20, 40)
tuple3.index(20)
```

Out[17]: 5

In [18]:
```
#find
tuple3=(1, 2, 3, 4, 4, 20, 40)
tuple3.find(2)
#tuple' object has no attribute 'find'
```

```
---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call last)
Cell In[18], line 2
      1 tuple3=(1, 2, 3, 4, 4, 20, 40)
----> 2 tuple3.find(2)

AttributeError: 'tuple' object has no attribute 'find'
```

```
In [19]:  #slice
          tuple3=(1, 2, 3, 4, 4, 20, 40)
          tuple3[0:4]
```

Out[19]: (1, 2, 3, 4)

```
In [21]:  #concatination
          tup1=(10,20,30,40)
          tup2=('Apple','Ball','Cat','meet')
          tup1+tup2
```

Out[21]: (10, 20, 30, 40, 'Apple', 'Ball', 'Cat', 'meet')

method

```
In [22]:  dir(())
```

Out[22]: ['__add__',
           '__class__',
           '__class_getitem__',
           '__contains__',
           '__delattr__',
           '__dir__',
           '__doc__',
           '__eq__',
           '__format__',
           '__ge__',
           '__getattribute__',
           '__getitem__',
           '__getnewargs__',
           '__getstate__',
           '__gt__',
           '__hash__',
           '__init__',
           '__init_subclass__',
           '__iter__',
           '__le__',
           '__len__',
           '__lt__',
           '__mul__',
           '__ne__',
           '__new__',
           '__reduce__',
           '__reduce_ex__',
           '__repr__',
           '__rmul__',
           '__setattr__',
           '__sizeof__',
           '__str__',
           '__subclasshook__',
           'count',
           'index']
```

```python
tup2=('Apple','Ball','Cat','meet')
t
```