In [1]:
```
x = ('Glenn', 'Sally', 'Joseph')
print(x[2])
```

```
Joseph
```

In [2]:
```
y = ( 1, 9, 2 )
print(y)
```

```
(1, 9, 2)
```

In [3]:
```
print(max(y))
```

```
9
```

In [4]:
```
l = list()
dir(l)
```

Out[4]:
```
['__add__',
 '__class__',
 '__class_getitem__',
 '__contains__',
 '__delattr__',
 '__delitem__',
 '__dir__',
 '__doc__',
 '__eq__',
 '__format__',
 '__ge__',
 '__getattribute__',
 '__getitem__',
 '__getstate__',
 '__gt__',
 '__hash__',
 '__iadd__',
 '__imul__',
 '__init__',
 '__init_subclass__',
 '__iter__',
 '__le__',
 '__len__',
 '__lt__',
 '__mul__',
 '__ne__',
 '__new__',
 '__reduce__',
 '__reduce_ex__',
 '__repr__',
 '__reversed__',
 '__rmul__',
 '__setattr__',
 '__setitem__',
 '__sizeof__',
 '__str__',
 '__subclasshook__',
 'append',
 'clear',
 'copy',
 'count',
 'extend',
 'index',
 'insert',
 'pop',
 'remove',
 'reverse',
 'sort']
```

In [5]:
```
t = tuple()
dir(t)
```

Out[5]:
```
['__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']
```

In [6]:
```
(x, y) = (4, 'fred')
print(y)
```

```
fred
```

In [7]:
```
(a, b) = (99, 98)
print(a)
```

```
99
```

In [8]:
```
d = dict()
d['csev'] = 2
d['cwen'] = 4
for (k,v) in d.items():
    print(k, v)
```

```
csev 2
cwen 4
```

In [9]:
```
tups = d.items()
print(tups)
```

```
dict_items([('csev', 2), ('cwen', 4)])
```

In [10]:
```
 (0, 1, 2) < (5, 1, 2)
```

Out[10]:
```
True
```

In [11]:
```
(0, 1, 2000000) < (0, 3, 4)
```

Out[11]:
```
True
```

In [12]:
```
( 'Jones', 'Sally' ) < ('Jones', 'Sam')
```

Out[12]:
```
True
```

In [13]:
```
 ( 'Jones', 'Sally') > ('Adams', 'Sam')
```

Out[13]:
```
True
```

In [14]:
```
d= {'a':10, 'b':1, 'c':22}
d.items()
```

Out[14]:
```
dict_items([('a', 10), ('b', 1), ('c', 22)])
```

In [15]:
```
sorted(d.items())
```

Out[15]:
```
[('a', 10), ('b', 1), ('c', 22)]
```

In [16]:
```
d = {'a':10, 'b':1, 'c':22}
t = sorted(d.items())
t
```

Out[16]:
```
[('a', 10), ('b', 1), ('c', 22)]
```

In [17]:
```
for k, v in sorted(d.items()):
    print(k, v)
```

```
a 10
b 1
c 22
```

In [18]:
```
c = {'a':10, 'b':1, 'c':22}
tmp = list()
for k, v in c.items() :
    tmp.append( (v, k) )
    print(tmp)
```

```
[(10, 'a')]
[(10, 'a'), (1, 'b')]
[(10, 'a'), (1, 'b'), (22, 'c')]
```

In [19]:
```
tmp = sorted(tmp, reverse=True)
print(tmp)
```

```
[(22, 'c'), (10, 'a'), (1, 'b')]
```

In [20]:
```
c = {'a':10, 'b':1, 'c':22}
print( sorted( [ (v,k) for k,v in c.items() ] ) )
```

```
[(1, 'b'), (10, 'a'), (22, 'c')]
```

In [ ]:
```

```