

Tuples

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# A TUPLE is an ordered collection of items, enclosed in '(' and ')',  
# and is very similar to a LIST except that its items cannot be changed.  
#  
# Tuples are appropriate for conveying and ensuring the immutability of data,  
# they can be implemented a little more efficiently than lists, and they can  
# be used in some situations where lists can not (e.g. dictionary keys).  
  
>>> t1 = ( )                # empty tuple  
>>> t2 = ( 5, )              # one-item tuple; note the ','  
>>> t3 = ( "Ann", 23, True, [ 5, 7, 4 ] ) # four-item tuple  
>>> t4 = ( "Ann", True, 23, [ 5, 7, 4 ] ) # four-item tuple  
>>> t3 == t4                 # order matters  
False  
>>> len( t1 )                # just like a list  
0  
>>> len( t3 )                # just like a list  
4  
>>> for item in t3 :         # just like a list  
>>>     print( e )  
Ann  
23  
True  
[5, 7, 4]  
>>> t3[ 1 ]                  # just like a list  
23  
>>> t3[ 3 ][ 1 ]             # just like a list  
7  
>>> t2 += ( 8, 3, 6 )        # just like a list  
>>> t2  
(5, 8, 3, 6)  
>>> 8 in t2                  # just like a list  
True  
>>> 7 in t2  
False  
>>> t2[ 3 ] = 7              # cannot change items in a tuple  
Traceback (most recent call last):  
  File "<stdin>", line 1, IN <module>  
TypeError: 'tuple' object does NOT support item assignment  
#-----
```