

Lists and Tuple Operations

```
Python 2.7.10 Shell

Python 2.7.10 (default, Jul 14 2015, 19:46:27)
[GCC 4.2.1 Compatible Apple LLVM 6.0 (clang-600.0.39)] on darwin
Type "copyright", "credits" or "license()" for more information.
>>> WARNING: The version of Tcl/Tk (8.5.9) in use may be unstable.
Visit http://www.python.org/download/mac/tcltk/ for current information.

>>> x = 3.5
>>> y = -1.78
>>> z = 6.29
>>> point1 = (x, y, z)
>>> type(point1)
<type 'tuple'>
>>> point2 = (x-1, y*2, z+6.1)
>>> point2
(2.5, -3.56, 12.39)
>>> point1
(3.5, -1.78, 6.29)
>>> allpoints = [point1, point2]
>>> allpoints
[(3.5, -1.78, 6.29), (2.5, -3.56, 12.39)]
>>> allpoints.append("foobar")
>>> allpoints
[(3.5, -1.78, 6.29), (2.5, -3.56, 12.39), 'foobar']
>>> point1[0] = 2.0

Traceback (most recent call last):
  File "<pyshell#13>", line 1, in <module>
    point1[0] = 2.0
TypeError: 'tuple' object does not support item assignment
>>> allpoints[2] = 'kaka'
>>> allpoints
[(3.5, -1.78, 6.29), (2.5, -3.56, 12.39), 'kaka']
>>> point3 = point1 + point2
>>> point3
(3.5, -1.78, 6.29, 2.5, -3.56, 12.39)
>>> id(point3)
4336872784
>>> point3 = (1, 2, 3)
>>> id(point3)
4361597008
>>> id(allpoints)
4361417432
>>> allpoints += [point3]
>>> allpoints
[(3.5, -1.78, 6.29), (2.5, -3.56, 12.39), 'kaka', (1, 2, 3)]
>>> id(allpoints)
4361417432
>>>
```