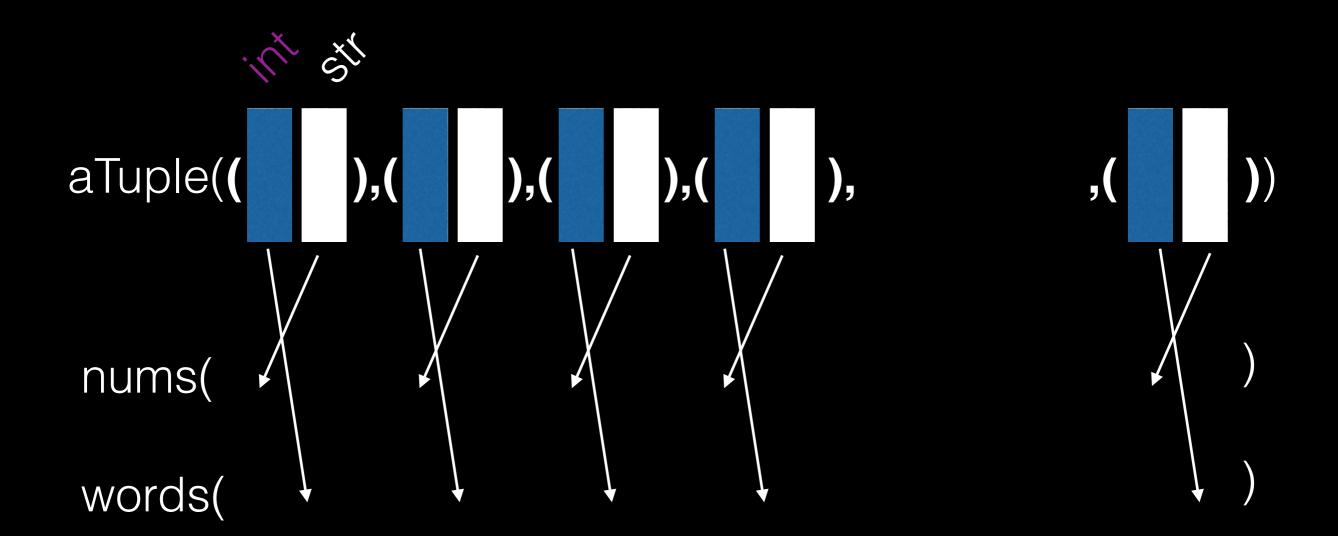
tuples lists dictionaries

tuples

ordered sequence of elements immutable represented by parenthesis

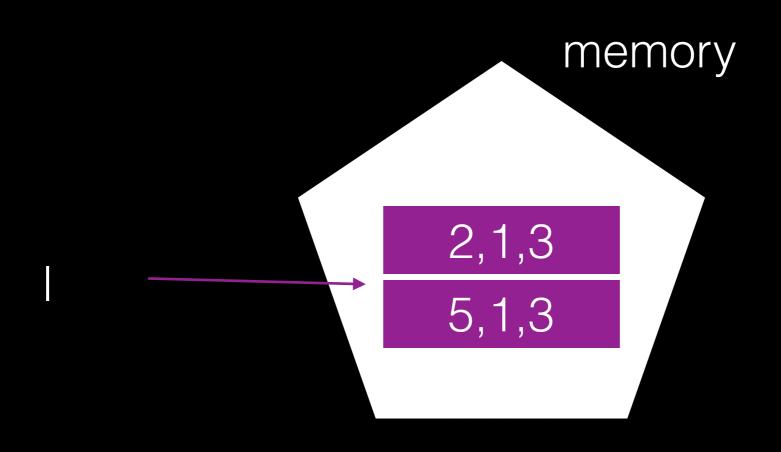
tuples

ordered sequence of elements immutable represented by parenthesis iterable



list

ordered sequence of elements mutable represented by square brackets



list

ordered sequence of elements mutable represented by square brackets iterable

standard operations on lists and tuples

lists

```
append extend pop remove join sorted sort reverse
```

standard operations on tuples

```
range(5) - equivalent to tuple (0,1,2,3,4)
range(2, 6) - equivalent to tuple (2,3,4,5)
range(5, 2, -1) - equivalent to tuple (5,4,3)
  for i in range(5):
        <expression>
  for i in (0,1,2,3,4):
        <expression>
```

Mutations, Aliasing, Cloning

lists

are mutable behave differently than immutable types is an object in memory variable name points to object any variable pointing to that object is effected keep in mind side effects



Justin Drew Bieber
Justin Bieber
JB
Bieber
The Bieb
JBeebs

attributes: singer, rich, troublemaker



cool ------- blue, green, grey

chill _____ blue,green,grey

cool — blue, green, grey

chill _____ blue,green,grey

Objects Frames Global scope list warm 'yellow' 'orange' hot list brightcolors 'red' 'pink' list

Mutations, Iterations

#