

```
Python 3.6.0 Shell
>>> [x for x in vec if x>=0]
[0, 2, 4]
>>> [abs(x) for x in vec]
[4, 2, 0, 2, 4]
>>>
>>> matrix = [[1,2,3,4],[5,6,7,8],[9,10,11,12],[0]]
>>> [row[i] for row in matrix] for i in range(4)
SyntaxError: invalid syntax
>>> [[row[i] for row in matrix] for i in range(4)]
Traceback (most recent call last):
  File "<pyshell#55>", line 1, in <module>
    [[row[i] for row in matrix] for i in range(4)]
  File "<pyshell#55>", line 1, in <listcomp>
    [[row[i] for row in matrix] for i in range(4)]
  File "<pyshell#55>", line 1, in <listcomp>
    [[row[i] for row in matrix] for i in range(4)]
IndexError: list index out of range
>>> matrix = [[1,2,3,4],[5,6,7,8],[9,10,11,12]]
>>> [[row[i] for row in matrix] for i in range(4)]
[[1, 5, 9], [2, 6, 10], [3, 7, 11], [4, 8, 12]]
>>> zip(*matrix) = [(1,5,9),(2,6,10),(3,7,11),(4,8,12)]
SyntaxError: can't assign to function call
>>> zip(*matrix)
<zip object at 0x1019cbe88>
>>>
>>> matrix = [[1,2,3,4],[5,6,7,8],[9,10,11,12]]
SyntaxError: unexpected indent
>>> matrix = [[1,2,3,4],[5,6,7,8],[9,10,11,12]]
>>> zip(*matrix)
<zip object at 0x1019cbec8>
>>> a = [1,2,3]
>>> b = [4,5,6]
>>> zip_demo1 = zip(a,b)
>>> zip_demo1
<zip object at 0x1019cbe88>
>>> list(zip_demo1)
[(1, 4), (2, 5), (3, 6)]
>>>
```

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Python3作了修正，解压缩时是对象，应用list遍历

reference:http://blog.csdn.net/qq_24918869/article/details/52080163

```
Python 3.6.0 Shell
<zip object at 0x1019cbec8>
>>> a = [1,2,3]
>>> b = [4,5,6]
>>> zip_demo1 = zip(a,b)
>>> zip_demo1
<zip object at 0x1019cbe88>
>>> list(zip_demo1)
[(1, 4), (2, 5), (3, 6)]
>>> import os
>>> files = [f for f in os.listdir('/Users/py/cpp') if f.endswith('.cpp')]
>>>
>>> files
['Add.cpp', 'HelloWorld.cpp', 'hexdigits.cpp', 'InputDemo1.cpp', 'inputSumDemo.cpp', 'pointerDemo1.cpp', 'ReadDemo.cpp', 'readDemo2.cpp', 'stringDemo1.cpp']
>>> map(list(zip_demo1))
Traceback (most recent call last):
  File "<pyshell#77>", line 1, in <module>
    map(list(zip_demo1))
TypeError: map() must have at least two arguments.
>>> map(list,zip_demo1)
<map object at 0x1019b33c8>
>>> list(map(list,zip_demo1))
[[1, 4], [2, 5], [3, 6]]
>>>
>>> zip_demo1
<zip object at 0x1019cbe88>
>>> list(zip_demo1)
[]
>>> a = [1,2,3]
>>>
>>> b = [4,5,6]
SyntaxError: unexpected indent
>>> b = [4,5,6]
>>> zip_demo1 = zip(a,b)
>>> map(list,zip_demo1)
<map object at 0x1019b3b38>
>>> list(map(list,zip_demo1))
[[1, 4], [2, 5], [3, 6]]
>>>
```

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