

Python小练习：列表的相关操作

作者：凯鲁嘎吉 - 博客园 <http://www.cnblogs.com/kailugaji/> (<http://www.cnblogs.com/kailugaji/>)

```
In [1]: # Python中列表的相关操作
```

```
In [2]: # 创建列表
```

```
In [3]: cities = ["Beijing", "Shanghai", 'Guangzhou', "Shenzhen", "Hangzhou"]
```

```
In [4]: # 索引
```

```
In [5]: cities[1]
```

```
Out[5]: 'Shanghai'
```

```
In [6]: cities[-1]
```

```
Out[6]: 'Hangzhou'
```

```
In [7]: cities[-2]
```

```
Out[7]: 'Shenzhen'
```

```
In [8]: cities[2:4]
```

```
Out[8]: ['Guangzhou', 'Shenzhen']
```

```
In [9]: cities[2:]
```

```
Out[9]: ['Guangzhou', 'Shenzhen', 'Hangzhou']
```

```
In [10]: cities[:2]
```

```
Out[10]: ['Beijing', 'Shanghai']
```

```
In [11]: # 判断某元素是否包含在列表中
```

```
In [12]: "Shanghai" in cities
```

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

```
In [13]: "Jinan" in cities
```

```
Out[13]: False
```

```
In [14]: # 添加元素至列表末尾
```

```
In [15]: cities.append("Jinan")
```

```
In [16]: cities
```

```
Out[16]: ['Beijing', 'Shanghai', 'Guangzhou', 'Shenzhen', 'Hangzhou', 'Jinan']
```

```
In [17]: # 将多个值一次性添加在列表中
```

```
In [18]: cities2 = ["Qingdao", "Jinan", 'Hangzhou', "Tianjin"]
```

```
In [19]: cities.extend(cities2)
```

```
In [20]: cities
```

```
Out[20]: ['Beijing',  
          'Shanghai',  
          'Guangzhou',  
          'Shenzhen',  
          'Hangzhou',  
          'Jinan',  
          'Qingdao',  
          'Jinan',  
          'Hangzhou',  
          'Tianjin']
```

```
In [21]: # 查询列表中的元素个数
```

```
In [22]: print(len(cities))
```

```
10
```

```
In [23]: # 排序，默认按字母与数字顺序
```

```
In [24]: cities.sort()
```

```
In [25]: cities
```

```
Out[25]: ['Beijing',  
          'Guangzhou',  
          'Hangzhou',  
          'Hangzhou',  
          'Jinan',  
          'Jinan',  
          'Qingdao',  
          'Shanghai',  
          'Shenzhen',  
          'Tianjin']
```

```
In [26]: cities.sort(reverse = True)
```

```
In [27]: cities
```

```
Out[27]: ['Tianjin',  
          'Shenzhen',  
          'Shanghai',  
          'Qingdao',  
          'Jinan',  
          'Jinan',  
          'Hangzhou',  
          'Hangzhou',  
          'Guangzhou',  
          'Beijing']
```

```
In [28]: # 统计某个元素在列表中出现的次数
```

```
In [29]: cities.count("Jinan")
```

```
Out[29]: 2
```

```
In [30]: # 查询某元素在列表中第一次出现是的索引值
```

```
In [31]: cities.index("Jinan")
```

```
Out[31]: 4
```

```
In [32]: # 在列表中指定位置插入元素
```

```
In [33]: cities.insert(2, "Taiyuan")
```

```
In [34]: cities
```

```
Out[34]: ['Tianjin',  
          'Shenzhen',  
          'Taiyuan',  
          'Shanghai',  
          'Qingdao',  
          'Jinan',  
          'Jinan',  
          'Hangzhou',  
          'Hangzhou',  
          'Guangzhou',  
          'Beijing']
```

```
In [35]: # 删除列表中的元素
```

```
In [36]: del cities[3]
```

```
In [37]: cities
```

```
Out[37]: ['Tianjin',  
          'Shenzhen',  
          'Taiyuan',  
          'Qingdao',  
          'Jinan',  
          'Jinan',  
          'Hangzhou',  
          'Hangzhou',  
          'Guangzhou',  
          'Beijing']
```

```
In [38]: # 删除列表指定位置元素并显示该元素
```

```
In [39]: cities.pop(6)
```

```
Out[39]: 'Hangzhou'
```

```
In [40]: cities
```

```
Out[40]: ['Tianjin',  
          'Shenzhen',  
          'Taiyuan',  
          'Qingdao',  
          'Jinan',  
          'Jinan',  
          'Hangzhou',  
          'Guangzhou',  
          'Beijing']
```

```
In [41]: # 删除列表中第一次出现的指定元素
```

```
In [42]: cities.remove("Jinan")
```

In [43]: cities

```
Out[43]: ['Tianjin',  
          'Shenzhen',  
          'Taiyuan',  
          'Qingdao',  
          'Jinan',  
          'Hangzhou',  
          'Guangzhou',  
          'Beijing']
```