

# Lists in python

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## 1 Lists

```
[1]: # Ordered sequences that can hold a variety of object types.  
# Use [] and , to separate objects in the list. Ex : [1,2,3,4,5]
```

```
[2]: my_list = [1,'abc',23.5]  
len(my_list)
```

```
[2]: 3
```

```
[3]: # Lists support slicing and indexing  
my_list[1:]
```

```
[3]: ['abc', 23.5]
```

```
[4]: list1 = ['one','two','three']  
list2 = ['four','five']  
list1 + list2
```

```
[4]: ['one', 'two', 'three', 'four', 'five']
```

```
[5]: new_list = list1 + list2  
new_list
```

```
[5]: ['one', 'two', 'three', 'four', 'five']
```

```
[7]: new_list[0] = 'ONE'  
new_list
```

```
[7]: ['ONE', 'two', 'three', 'four', 'five']
```

## 2 append() and pop()

```
[8]: new_list.append('six') # appends an item to the end of the list  
new_list
```

```
[8]: ['ONE', 'two', 'three', 'four', 'five', 'six']
```

```
[12]: new_list.pop() # removes an item from the end of the list
new_list
```

```
[12]: ['ONE', 'two', 'three', 'four', 'five']
```

```
[13]: new_list.pop(0) # removes an item from the specified index
new_list
```

```
[13]: ['two', 'three', 'four', 'five']
```

### 3 Sorting and reversing

```
[ ]:
```

```
[14]: list1 = ['b','h','e','u','o']
list2 = [3,8,90,2,-1]
list1.sort()
```

```
[15]: type(list1.sort)
```

```
[15]: builtin_function_or_method
```

```
[16]: list1.sort()
sorted_list = list1.sort() # here it cannot be reassigned to sorted_list
sorted_list
```

```
[17]: type(sorted_list)
```

```
[17]: NoneType
```

```
[18]: list1.sort()
my_sorted_list = list1 # now my_sorted_list will return the answer
my_sorted_list
```

```
[18]: ['b', 'e', 'h', 'o', 'u']
```

```
[19]: list2.sort()
new_list2 = list2
new_list2
```

```
[19]: [-1, 2, 3, 8, 90]
```

```
[20]: # reverse() reverses order of the items in a list
```

```
[21]: num_list = [1,2,3,4,5]
num_list.reverse()
num_list
```

```
[21]: [5, 4, 3, 2, 1]
```

#### 4 index in a nested list

```
[23]: my_list = [1,1,[1,2]]  
      my_list[2][1]
```

```
[23]: 2
```

```
[ ]:
```