

# List

- Lists are ordered sequence that can hold a variety of object types.

- List support indexing and slicing. Lists can be nested and also have a variety of useful methods that can be called off of them.

- Unlike the strings, we can mutate and change around the list

```
In [1]: my_list = [1,2,3]
```

```
In [2]: my_list = ["STRING",100,3.14]
```

```
In [3]: len(my_list)
```

```
Out[3]: 3
```

## List Indexing and Slicing

```
In [4]: myList = ["one","two","three"]
```

```
In [5]: myList[0]
```

```
Out[5]: 'one'
```

```
In [7]: myList[0:2]
```

```
Out[7]: ['one', 'two']
```

## Concatinating Lists

```
In [32]: anotherList = ["four","five","six"]  
myList + anotherList
```

```
Out[32]: ['one', 'two', 'three', 'four', 'five', 'six']
```

```
In [33]: myList
```

```
Out[33]: ['one', 'two', 'three']
```

```
In [34]: anotherList
```

```
Out[34]: ['four', 'five', 'six']
```

```
In [35]: newList = myList + anotherList  
newList
```

```
Out[35]: ['one', 'two', 'three', 'four', 'five', 'six']
```

```
In [36]: newList[0] ="ONE ALL CAPS"  
newList
```

```
Out[36]: ['ONE ALL CAPS', 'two', 'three', 'four', 'five', 'six']
```

```
In [37]: newList.append("SEVEN")
```

```
In [38]: newList
```

```
Out[38]: ['ONE ALL CAPS', 'two', 'three', 'four', 'five', 'six', 'SEVEN']
```

```
In [39]: # This will remove the last item off the list  
poppedItem = newList.pop()  
poppedItem
```

```
Out[39]: 'SEVEN'
```

```
In [40]: newList
```

```
Out[40]: ['ONE ALL CAPS', 'two', 'three', 'four', 'five', 'six']
```

```
In [5]: new_list = ['a', 'b', 'x', 'c', 'e']  
num_list = [9, 3, 4, 1, 2, 0]
```

```
In [6]: new_list.sort()
```

```
In [7]: new_list
```

```
Out[7]: ['a', 'b', 'c', 'e', 'x']
```

```
In [8]: my_sorted_list = new_list.sort()
```

```
In [9]: type(my_sorted_list)
```

```
Out[9]: NoneType
```

```
In [10]: new_list.sort()  
my_sorted_list = new_list
```

```
In [11]: my_sorted_list
```

```
Out[11]: ['a', 'b', 'c', 'e', 'x']
```

```
In [ ]:
```

```
In [14]: num_list.sort()
```

```
In [16]: num_list
```

```
Out[16]: [0, 1, 2, 3, 4, 9]
```

```
In [17]: num_list.reverse()
```

```
In [18]: num_list
```

```
Out[18]: [9, 4, 3, 2, 1, 0]
```

```
In [ ]:
```