Python Lists - Part II

Sorting Elements from the List

In [7]:
```
x = [3, 5, 7, 9, 1]  # int list
```

In [8]:
```
# list.sort?
```

In [9]:
```
x.sort()
```

In [10]:
```
x
```

Out[10]: [1, 3, 5, 7, 9]

In [ ]:
```

```

In [11]:
```
x = [3, 5, 7, 9, 1]
```

In [14]:
```
x.sort(reverse=True)
```

In [15]:
```
x
```

Out[15]: [9, 7, 5, 3, 1]

In [ ]:
```

```

In [20]:
```
x = [3, 5, 7, 9, 1]
```

In [21]:
```
y = sorted(x, reverse=True)
```

In [22]:
```
y
```

Out[22]: [9, 7, 5, 3, 1]

In [ ]:
```

```

In [35]:
```
x = [[2, 5], [3, 1], [1, 3]]
```

In [36]:
```
x.sort(key=lambda x: x[0])
```

In [37]:
```
x
```

Out[37]:
```
[[1, 3], [2, 5], [3, 1]]
```

In [25]:
```
# sorted(x)
```

In [ ]:
```

```

Reversing List Elements

In [49]:
```
x = [2, 5, 1, 8, 3]
```

In [50]:
```
# x.reverse()
```

In [51]:
```
# x
```

In [52]:
```
x[::-1]  # copy
```

Out[52]:
```
[3, 8, 1, 5, 2]
```

In [41]:
```
list(reversed(x)) # copy
```

Out[41]:
```
[3, 8, 1, 5, 2]
```

In [ ]:
```

```

Inserting Elements from the List

In [53]:
```
x = [2, 6, 7, 8, 1]
```

In [55]:
```
x.insert(3, 50)
```

In [56]:
```
x
```

Out[56]:
```
[2, 6, 7, 50, 8, 1]
```

In [57]:
```
x.insert(0, [2, 3, 1])
```

In [58]:
```
x
```

Out[58]:
```
[[2, 3, 1], 2, 6, 7, 50, 8, 1]
```

In [ ]:

Extending Elements from the List

In [63]:
```
x = [2, 5, 1]
```

In [64]:
```
y = [1, 9, 3]
```

In [65]:
```
x.extend(y)
```

In [66]:
```
x
```

Out[66]: [2, 5, 1, 1, 9, 3]

In [ ]:

In [69]:
```
x = [2, 5, 1]
```

In [70]:
```
y = [1, 9, 3]
```

In [72]:
```
z = x + y
```

In [73]:
```
z
```

Out[73]: [2, 5, 1, 1, 9, 3]

In [ ]:

In [74]:
```
x = [2, 6, 1]
```

In [76]:
```
x + [3]
```

Out[76]: [2, 6, 1, 3]

In [ ]:

Removing Elements from the List

In [77]:
```
# list.remove()
# del
```

```
In [78]: x = [1, 6, 7, 9, 2]

In [79]: x.remove(9)

In [80]: x
Out[80]: [1, 6, 7, 2]

In [81]: x = [1, 6, 7, 9, 2]

In [82]: del x[-3:]

In [83]: x
Out[83]: [1, 6]

In [84]: x
Out[84]: [1, 6]

In [85]: del x[:]

In [87]: del x

In [88]: x = [1, 6, 7, 9, 2]

In [89]: x.clear()

In [90]: x
Out[90]: []

In [ ]:
```

Popping Elements from the List

```
In [100]: x = [2, 6, 7, 1, 9]

In [101]: x.pop(2)
Out[101]: 7
```

In [102]:
```
x
```

Out[102]:
```
[2, 6, 1, 9]
```

In [ ]:
```

```

Searching Elements from the List

In [103]:
```
x = [3, 5, 6, 1, 2]
```

In [106]:
```
x.index(1)  # int
```

Out[106]:
```
3
```

In [107]:
```
x
```

Out[107]:
```
[3, 5, 6, 1, 2]
```

In [108]:
```
5 in x  # boolean result
```

Out[108]:
```
True
```

In [ ]:
```

```

In [109]:
```
# ...
```

Happy Learning :)