Python Data Structures *List* Tuple *Sets* Distionary

```
In [4]:  l = []
```

```
In [6]:  len(l)
```

```
Out[6]:  0
```

```
In [8]:  l.append(10)
         l
```

```
Out[8]:  [10]
```

```
In [10]:  len(l)
```

```
Out[10]:  1
```

```
In [12]:  l.append(20)
          l.append(30)
          l.append(40)
          l.append(50)
```

```
In [14]:  l
```

```
Out[14]:  [10, 20, 30, 40, 50]
```

```
In [16]:  len(l)
```

```
Out[16]:  5
```

```
In [18]:  id(l)
```

```
Out[18]:  3151482011584
```

```
In [20]:  type(l)
```

```
Out[20]:  list
```

```
In [26]:  l[:]
          l
```

```
Out[26]:  [10, 20, 30, 40, 50]
```

```
In [28]:  l[0]
```

```
Out[28]:  10
```

```
In [30]:  l[3]
```

```
Out[30]:  40
```

```
In [32]:  l[-3]
```

```
Out[32]:  30
```

In [34]: `l`

Out[34]: `[10, 20, 30, 40, 50]`

In [36]:
```python
l1 = l.copy()
l1
```

Out[36]: `[10, 20, 30, 40, 50]`

In [38]: `l == l1`

Out[38]: `True`

In [40]: `len(l1)`

Out[40]: `5`

In [42]: `print(len(l), len(l1))`

```
5 5
```

In [44]:
```python
l1.append(2.3)
l1.append(True)
l1.append(2+3j)
```

In [46]: `l1`

Out[46]: `[10, 20, 30, 40, 50, 2.3, True, (2+3j)]`

In [48]:
```python
l1.append(50)
l1
```

Out[48]: `[10, 20, 30, 40, 50, 2.3, True, (2+3j), 50]`

In [50]: `l1.count(50)`

Out[50]: `2`

In [52]: `l1.count(123)`

Out[52]: `0`

In [54]: `l1.count(False)`

Out[54]: `0`

In [56]: `l2 = l1.copy()`

In [58]: `l2`

Out[58]: `[10, 20, 30, 40, 50, 2.3, True, (2+3j), 50]`

In [60]: `l2.remove(True)`

In [62]: `l2`

```
Out[62]:  [10, 20, 30, 40, 50, 2.3, (2+3j), 50]
```

```
In [64]:  l2.count(50)
```

```
Out[64]:  2
```

```
In [68]:  l2.append(123)
```

```
In [70]:  l2
```

```
Out[70]:  [10, 20, 30, 40, 50, 2.3, (2+3j), 50, 123]
```

```
In [72]:  l2.clear()
```

```
In [74]:  l2
```

```
Out[74]:  []
```

```
In [76]:  l2.del()
```

```
  Cell In[76], line 1
    l2.del()
         ^
SyntaxError: invalid syntax
```

```
In [78]:  del l2
```

```
In [80]:  l2
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[80], line 1
----> 1 l2

NameError: name 'l2' is not defined
```

```
In [82]:  print(l)
          print(l1)
```

```
[10, 20, 30, 40, 50]
[10, 20, 30, 40, 50, 2.3, True, (2+3j), 50]
```

```
In [88]:  l.append([1,2,3, hi])
          l
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[88], line 1
----> 1 l.append([1,2,3, hi])
        2 l

NameError: name 'hi' is not defined
```

```
In [90]:  l.append([1,2,3, 'hi'])
          l
```

```
Out[90]:  [10, 20, 30, 40, 50, [1, 2, 3, 'hi']]
```

```
In [92]:   l[4]
```

```
Out[92]:   50
```

```
In [96]:   l.pop()
```

```
Out[96]:   [1, 2, 3, 'hi']
```

```
In [98]:   l
```

```
Out[98]:   [10, 20, 30, 40, 50]
```

```
In [100…   l.insert(35, 3)
```

```
In [102…   l
```

```
Out[102…   [10, 20, 30, 40, 50, 3]
```

```
In [104…   l.insert(3,35)
           l
```

```
Out[104…   [10, 20, 30, 35, 40, 50, 3]
```

```
In [106…   l.pop()
```

```
Out[106…   3
```

```
In [108…   l
```

```
Out[108…   [10, 20, 30, 35, 40, 50]
```

```
In [110…   l.index(35)
```

```
Out[110…   3
```

```
In [112…   l.append(-1)
```

```
In [114…   l
```

```
Out[114…   [10, 20, 30, 35, 40, 50, -1]
```

```
In [116…   l.append(3.5)
           l.append(1.2)
```

```
In [118…   l
```

```
Out[118…   [10, 20, 30, 35, 40, 50, -1, 3.5, 1.2]
```

```
In [120…   l.sort()
```

```
In [122…   l
```

```
Out[122…   [-1, 1.2, 3.5, 10, 20, 30, 35, 40, 50]
```

In [124…
```python
l.sort(reverse=True)
l
```

Out[124…   [50, 40, 35, 30, 20, 10, 3.5, 1.2, -1]

In [ ]: