26 sep Python Inbuilt Data structures

List

In [ ]:
```
```

In [3]:
```
l=[]
l
```

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

In [4]:
```
l1=list()
l1
```

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

In [5]:
```
type(l)
```

Out[5]:
```
list
```

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

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

In [7]:
```
len(l1)
```

Out[7]:
```
0
```

In [ ]:
```
```

List Function

In [8]:
```
l
```

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

In [12]:
```
l.append(10)
```

In [13]:
```
l
```

Out[13]:
```
[10, 10, 10]
```

In [16]:
```
l.remove(10,10)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[16], line 1
----> 1 l.remove(10,10)

TypeError: list.remove() takes exactly one argument (2 given)
```

In [17]:
```
l
```

Out[17]:
```
[10, 10]
```

In [19]:
```
l.remove(10)
```

In [20]:
```
l
```

Out[20]:
```
[10]
```

In [21]:
```
l.append(20)
l.append(30)
l.append(40)
l.append(50)
l
```

Out[21]:
```
[10, 20, 30, 40, 50]
```

In [22]:
```
len(l)
```

Out[22]:
```
5
```

In [23]:
```
l1
```

Out[23]:
```
[]
```

In [24]:
```
l1.append(2.3)
```

```
l1.append(True)
l1.append('10')
l1.append(1+2j)
l1
```

Out[24]: [2.3, True, '10', (1+2j)]

In [25]:
```
l1
```

Out[25]: [2.3, True, '10', (1+2j)]

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

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

In [28]:
```
l1.append(2.3)
l1
```

Out[28]: [2.3, True, '10', (1+2j), 2.3, 2.3]

In [29]:
```
l2
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[29], line 1
----> 1 l2

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

In [30]:
```
l2=l1.copy()
```

In [31]:
```
l2
```

Out[31]: [2.3, True, '10', (1+2j), 2.3, 2.3]

In [32]:
```
l1
```

Out[32]: [2.3, True, '10', (1+2j), 2.3, 2.3]

In [33]:
```
l1==l2
```

Out[33]: True

In [34]:
```
l
```

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

In [35]:
```
l==l2
```

Out[35]: False

In [36]:
```
l2==l1
```

Out[36]: True

In [37]:
```
l2
```

Out[37]: [2.3, True, '10', (1+2j), 2.3, 2.3]

In [38]:
```
l2.clear()
```

In [39]:
```
l2
```

Out[39]: []

In [40]:
```
len(l2)
```

Out[40]: 0

In [41]:
```
l2.append(50)
l2.append(8.9)
l2.append('hi')
l2.append(False)
l2.append(1+2j)
l2
```

Out[41]: [50, 8.9, 'hi', False, (1+2j)]

In [42]:
```
print(l)
```

```
print(l1)
print(l2)
```

```
[10, 20, 30, 40, 50]
[2.3, True, '10', (1+2j), 2.3, 2.3]
[50, 8.9, 'hi', False, (1+2j)]
```

In [ ]:

In [43]:
```
l
```

Out[43]: [10, 20, 30, 40, 50]

In [44]:
```
l[:]
```

Out[44]: [10, 20, 30, 40, 50]

In [45]:
```
l[3]
```

Out[45]: 40

In [46]:
```
l1
```

Out[46]: [2.3, True, '10', (1+2j), 2.3, 2.3]

In [47]:
```
l1[2:]
```

Out[47]: ['10', (1+2j), 2.3, 2.3]

In [48]:
```
l1[:4]
```

Out[48]: [2.3, True, '10', (1+2j)]

In [ ]:

In [49]:
```
l2
```

Out[49]: [50, 8.9, 'hi', False, (1+2j)]

In [50]:
```
l2[:5]
```

Out[50]: [50, 8.9, 'hi', False, (1+2j)]

In [51]:
```
l2[:-2]
```

Out[51]: [50, 8.9, 'hi']

In [52]:
```
l2[-4:]
```

Out[52]: [8.9, 'hi', False, (1+2j)]

In [ ]:

In [53]:
```
l
```

Out[53]: [10, 20, 30, 40, 50]

In [54]:
```
l[:-2]
```

Out[54]: [10, 20, 30]

In [55]:
```
l[-4:-2]
```

Out[55]: [20, 30]

In [ ]:

In [56]:
```
l1
```

Out[56]: [2.3, True, '10', (1+2j), 2.3, 2.3]

In [57]:
```
l1[:-4]
```

Out[57]: [2.3, True]

In [58]:
```
l1[:2]
```

Out[58]: [2.3, True]

In [ ]:

In [59]:
```
l2
```

Out[59]:
```
[50, 8.9, 'hi', False, (1+2j)]
```

In [60]:
```
l2[:4]
```

Out[60]:
```
[50, 8.9, 'hi', False]
```

In [61]:
```
l2[-2:-6]
```

Out[61]:
```
[]
```

In [62]:
```
l2[-1:]
```

Out[62]:
```
[(1+2j)]
```

In [ ]:

In [63]:
```
l1
```

Out[63]:
```
[2.3, True, '10', (1+2j), 2.3, 2.3]
```

In [64]:
```
l1.count(l1)
```

Out[64]:
```
0
```

In [65]:
```
l1.count(2.3)
```

Out[65]:
```
3
```

In [66]:
```
l1.count(.)
```

```
  Cell In[66], line 1
    l1.count(.)
             ^
SyntaxError: invalid syntax
```

In [ ]:

In [67]:
```
l1
```

Out[67]:
```
[2.3, True, '10', (1+2j), 2.3, 2.3]
```

In [68]:
```
l1.index(True)
```

Out[68]:
```
1
```

In [ ]:

In [69]:
```
l1
```

Out[69]:
```
[2.3, True, '10', (1+2j), 2.3, 2.3]
```

In [70]:
```
l1.remove(2.3)
```

In [71]:
```
l1
```

Out[71]:
```
[True, '10', (1+2j), 2.3, 2.3]
```

In [72]:
```
l1
```

Out[72]:
```
[True, '10', (1+2j), 2.3, 2.3]
```

In [74]:
```
l1.remove('10')
```

In [75]:
```
l1
```

Out[75]:
```
[True, (1+2j), 2.3, 2.3]
```

In [ ]:

In [77]:
```
l1.append([1,2,3])
```

In [78]:
```
l1
```

Out[78]: [True, (1+2j), 2.3, 2.3, [1, 2, 3]]

In [ ]: