

list

```
In [6]: l = []  
l
```

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

```
In [7]: type(l)
```

```
Out[7]: list
```

```
In [8]: len(l)
```

```
Out[8]: 0
```

```
In [9]: l.append(40)  
l
```

```
Out[9]: [40]
```

```
In [10]: l.append(30)  
l.append(64)  
l.append(12)  
l.append(34)  
l
```

```
Out[10]: [40, 30, 64, 12, 34]
```

```
In [11]: len(l)
```

```
Out[11]: 5
```

```
In [12]: l4 = [10, 4.8, 'hi', True, (2+4j)]  
l4
```

```
Out[12]: [10, 4.8, 'hi', True, (2+4j)]
```

```
In [13]: l  
l4
```

```
Out[13]: [10, 4.8, 'hi', True, (2+4j)]
```

```
In [14]: print(l)  
print(l4)
```

```
[40, 30, 64, 12, 34]  
[10, 4.8, 'hi', True, (2+4j)]
```

```
In [16]: print(len(l))  
print(len(l4))
```

```
5  
5
```

```
In [17]: print(id(l))  
         print(id(l4))
```

```
2924653692224  
2924654010112
```

```
In [18]: l6
```

```
-----  
NameError                                Traceback (most recent call last)  
Cell In[18], line 1  
----> 1 l6  
  
NameError: name 'l6' is not defined
```

```
In [21]: l6 = l4.copy()  
         l6
```

```
Out[21]: [10, 4.8, 'hi', True, (2+4j)]
```

```
In [22]: l4 == l6
```

```
Out[22]: True
```

```
In [23]: l6 == l
```

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

```
In [24]: print(l)  
         print(l4)  
         print(l6)
```

```
[40, 30, 64, 12, 34]  
[10, 4.8, 'hi', True, (2+4j)]  
[10, 4.8, 'hi', True, (2+4j)]
```

```
In [25]: l6 != l
```

```
Out[25]: True
```

```
In [26]: l1 = [11,12,13,14,15]  
         l1
```

```
Out[26]: [11, 12, 13, 14, 15]
```

```
In [27]: l1[:]
```

```
Out[27]: [11, 12, 13, 14, 15]
```

```
In [ ]:
```

```
In [30]: l1[4]
```

```
Out[30]: 15
```

```
In [32]: l1[-2]
```

Out[32]: 14

In [28]: `l1[:4]`

Out[28]: [11, 12, 13, 14]

In [33]: `l1[0:2]`

Out[33]: [11, 12]

In [34]: `l1[2]`

Out[34]: 13

In [35]: `l1[2] = 18`
`l1`

Out[35]: [11, 12, 18, 14, 15]

In [36]: `l1[-1] = 'mon'`
`l1`

Out[36]: [11, 12, 18, 14, 'mon']

In [48]: `l2 = [2, 4.2, 'sat', True, 3+4j]`
`l2`

Out[48]: [2, 4.2, 'sat', True, (3+4j)]

In [50]: `len(l2)`

Out[50]: 5

In [51]: `l2.clear()`
`l2`

Out[51]: []

In [52]: `len(l2)`

Out[52]: 0

In [53]: `l8 = [10, 50, 'wed', 2.6, 'feb', 10]`
`l8`

Out[53]: [10, 50, 'wed', 2.6, 'feb', 10]

In [54]: `l8.count(10)`

Out[54]: 2

In [56]: `l8.count(50)`

Out[56]: 1

```
In [57]: 18.count(20)
```

```
Out[57]: 0
```

```
In [58]: print(l1)
         print(l2)
         print(l4)
         print(l6)
         print(l8)
```

```
[40, 30, 64, 12, 34]
[]
[]
[10, 4.8, 'hi', True, (2+4j)]
[10, 50, 'wed', 2.6, 'feb', 10]
```

```
In [60]: print(len(l1))
         print(len(l2))
         print(len(l4))
         print(len(l6))
         print(len(l8))
```

```
5
0
0
5
6
```

list membership

```
In [61]: 18
```

```
Out[61]: [10, 50, 'wed', 2.6, 'feb', 10]
```

```
In [62]: 10 in 18
```

```
Out[62]: True
```

```
In [63]: 20 in 18
```

```
Out[63]: False
```

```
In [64]: 16
```

```
Out[64]: [10, 4.8, 'hi', True, (2+4j)]
```

```
In [65]: 12
```

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

```
In [66]: print(len(l8))
         print(len(l6))
         print(len(l2))
```

6
5
0

In [68]: 12

Out[68]: []

In [69]: 16

Out[69]: [10, 4.8, 'hi', True, (2+4j)]

In [70]: 18

Out[70]: [10, 50, 'wed', 2.6, 'feb', 10]

In [72]: 16.extend(18)
16

Out[72]: [10,
4.8,
'hi',
True,
(2+4j),
10,
50,
'wed',
2.6,
'feb',
10,
10,
50,
'wed',
2.6,
'feb',
10]

In [74]: 12.extend(18)
12

Out[74]: [10, 50, 'wed', 2.6, 'feb', 10]

In [75]: len(12)

Out[75]: 6

In [76]: 12

Out[76]: [10, 50, 'wed', 2.6, 'feb', 10]

In [77]: 12.index('feb')

Out[77]: 4

In [78]: 12[:3]

Out[78]: [10, 50, 'wed']

```
In [79]: 12[:]
```

```
Out[79]: [10, 50, 'wed', 2.6, 'feb', 10]
```

```
In [81]: 12[2:5]
```

```
Out[81]: ['wed', 2.6, 'feb']
```

```
In [82]: 12[::3]
```

```
Out[82]: [10, 2.6]
```

```
In [83]: 12[::2]
```

```
Out[83]: [10, 'wed', 'feb']
```

backward indexing and backward slicing

```
In [84]: l = [10, 20, 30, 'mon', 40, 'feb', True]  
1
```

```
Out[84]: [10, 20, 30, 'mon', 40, 'feb', True]
```

```
In [85]: l[-1]
```

```
Out[85]: True
```

```
In [86]: l[-5]
```

```
Out[86]: 30
```

```
In [87]: l[:-5]
```

```
Out[87]: [10, 20]
```

```
In [89]: l[-5:]
```

```
Out[89]: [30, 'mon', 40, 'feb', True]
```

```
In [91]: l[::-1]
```

```
Out[91]: [True, 'feb', 40, 'mon', 30, 20, 10]
```

```
In [92]: l[::-2]
```

```
Out[92]: [True, 40, 30, 10]
```

```
In [110...]: l = [10, 20, 30, 'mon', 40, 'feb', True]  
1
```

```
Out[110...]: [10, 20, 30, 'mon', 40, 'feb', True]
```

```
In [111...]: l.remove('mon')
```

```
print(l)
```

```
[10, 20, 30, 40, 'feb', True]
```

```
In [ ]:
```