👍A single list may contain DataTypes like Integers, Strings, as well as Objects.

append(): Adds an element to the end of the list.
extend(): Adds elements from another list to the end of the list.
insert(): Inserts an element at a specified position.
remove(): Removes the first occurrence of a specified value.
pop(): Removes and returns the element at a specified index.
clear(): Removes all elements from the list.
index(): Returns the index of the first occurrence of a value.
count(): Returns the number of occurrences of a value.
sort(): Sorts the list in ascending order.
reverse(): Reverses the order of elements in the list.

Blank List

In [14]:
```
li_1 = []
li_1
```

Out[14]: []

In [15]:
```
type(li_1)
```

Out[15]: list

In [16]:
```
id(li_1)
```

Out[16]: 2880483263424

In [17]:
```
li_1.append([100, 200.78, 8+2j, True, 'Amrita'])
li_1
```

Out[17]: [[100, 200.78, (8+2j), True, 'Amrita']]

In [28]:
```
li_2 = []
li_2.append([30, 89, 45, 'Shikha'])
li_2
```

Out[28]: [[30, 89, 45, 'Shikha']]

In [22]:
```
li_3 = []
li_3.append([4.8, 5.9, 3.78])
li_3
```

Out[22]: [[4.8, 5.9, 3.78]]

In [23]:
```
li_4 = []
li_4.append([145, 90, 67, 35, 0, 'Navneet'])
li_4
```

Out[23]:
```
[[145, 90, 67, 35, 0, 'Navneet']]
```

In [30]:
```
len(li_2)
## why am I getting output as 1
```

Out[30]:
```
1
```

This is the difference when you use append function to add an elements, where, you pass complete list at once, you will get '1' as an output if you try to run len().

In [60]:
```
s = []
s
```

Out[60]:
```
[]
```

In [61]:
```
s.append(45)
s.append(67)
s.append(23)
s.append(90)
s.append('ShikhaKushwaha')
s.append('NavneetKushwaha')
s.append(7+4j)
s
```

Out[61]:
```
[45, 67, 23, 90, 'ShikhaKushwaha', 'NavneetKushwaha', (7+4j)]
```

In [38]:
```
len(s)
```

Out[38]:
```
7
```

Here, the output is as expected because, under append() only one element has been paased.

In [39]:
```
len(li_1)
```

Out[39]:
```
1
```

In [40]:
```
len(li_2)
```

Out[40]:
```
1
```

In [41]:
```
len(li_3)
```

Out[41]: 1

In [42]:
```
len(li_4)
```

Out[42]: 1

In [43]:
```
for i in li_3:
    print(li_3)
```

```
[[4.8, 5.9, 3.78]]
```

In [62]:
```
s1 = []
s1
```

Out[62]: []

In [63]:
```
s1.append(2)
s1.append(9)
s1.append(34)
s1.append(78)
s1.append('shrishti')
s1
```

Out[63]: [2, 9, 34, 78, 'shrishti']

In [64]:
```
s3 = s.copy()
s3
```

Out[64]: [45, 67, 23, 90, 'ShikhaKushwaha', 'NavneetKushwaha', (7+4j)]

In [65]:
```
s.count(67)
s3
```

Out[65]: [45, 67, 23, 90, 'ShikhaKushwaha', 'NavneetKushwaha', (7+4j)]

In [66]:
```
s.append(23)
s
```

Out[66]: [45, 67, 23, 90, 'ShikhaKushwaha', 'NavneetKushwaha', (7+4j), 23]

In [67]:
```
s.count(23)
```

Out[67]: 2

In [68]:
```
s.extend(s1)
s
```

Out[68]:
```
[45,
 67,
 23,
 90,
 'ShikhaKushwaha',
 'NavneetKushwaha',
 (7+4j),
 23,
 2,
 9,
 34,
 78,
 'shrishti']
```

In [69]:
```
s3.clear()
s3
```

Out[69]:
```
[]
```

In [70]:
```
s
```

Out[70]:
```
[45,
 67,
 23,
 90,
 'ShikhaKushwaha',
 'NavneetKushwaha',
 (7+4j),
 23,
 2,
 9,
 34,
 78,
 'shrishti']
```

In [71]:
```
s.insert(2, 13)
s
```

Out[71]:
```
[45,
 67,
 13,
 23,
 90,
 'ShikhaKushwaha',
 'NavneetKushwaha',
 (7+4j),
 23,
 2,
 9,
 34,
 78,
 'shrishti']
```

In [72]:
```
s.remove(90)
s
```

Out[72]:
```
[45,
 67,
 13,
 23,
 'ShikhaKushwaha',
 'NavneetKushwaha',
 (7+4j),
 23,
 2,
 9,
 34,
 78,
 'shrishti']
```

In [74]:
```
s[0:8]
```

Out[74]:
```
[45, 67, 13, 23, 'ShikhaKushwaha', 'NavneetKushwaha', (7+4j), 23]
```

In [75]:
```
s[::-2]
```

Out[75]:
```
['shrishti', 34, 2, (7+4j), 'ShikhaKushwaha', 13, 45]
```

In [78]:
```
s[1:9]
```

Out[78]:
```
[67, 13, 23, 'ShikhaKushwaha', 'NavneetKushwaha', (7+4j), 23, 2]
```

In [79]:
```
s.index(23)
```

Out[79]:
```
3
```

In [81]:
```
s.pop(5)
```

Out[81]:
```
'NavneetKushwaha'
```

In [84]:
```
print(s[4][9])
```

```
h
```

In [92]:
```
s6 = s.reverse()
s6
```

In [93]:
```
s
```

Out[93]:
```
['shrishti', 78, 34, 9, 2, 23, (7+4j), 'ShikhaKushwaha', 23, 13, 67, 45]
```

In [94]:
```
0 in s
```

Out[94]:
```
False
```

In [95]:
```
0 in li_3
```

Out[95]:
```
False
```

In [98]:
```
for i in enumerate(s):
    print(i)
```

```
(0, 'shrishti')
(1, 78)
(2, 34)
(3, 9)
(4, 2)
(5, 23)
(6, (7+4j))
(7, 'ShikhaKushwaha')
(8, 23)
(9, 13)
(10, 67)
(11, 45)
```

In [100]:
```
all('7+4j')
```

Out[100]:
```
True
```

In [ ]: