

# Python Lists

```
In [2]: listx = ["apple", "banana", "cherry", "apple", "cherry"]
```

```
In [4]: print(listx)
```

```
['apple', 'banana', 'cherry', 'apple', 'cherry']
```

```
In [6]: listx[0]
```

```
Out[6]: 'apple'
```

```
In [10]: listx[-1]
```

```
Out[10]: 'cherry'
```

```
In [14]: len(listx)
```

```
Out[14]: 5
```

```
In [16]: print(len(listx))
```

```
5
```

```
In [18]: ist1 = ["abc", 34, True, 40, "male"]  
ist1
```

```
Out[18]: ['abc', 34, True, 40, 'male']
```

```
In [20]: ist1[0][1]
```

```
Out[20]: 'b'
```

```
In [24]: ist1[4][2]
```

```
Out[24]: 'l'
```

```
In [26]: type(ist1)
```

```
Out[26]: list
```

```
In [28]: print(type(ist1))
```

```
<class 'list'>
```

## Python - Access List Items

```
In [31]: thislist = ["apple", "banana", "cherry"]
```

```
In [33]: thislist[1]
```

```
Out[33]: 'banana'
```

```
In [35]: thislist[-1]
```

```
Out[35]: 'cherry'
```

## Change Item Value

```
In [38]: thislist = ["apple", "banana", "cherry"]
```

```
In [44]: thislist[1]= "Orange"  
print(thislist)
```

```
['apple', 'Orange', 'cherry']
```

```
In [46]: thislist = ["apple", "banana", "cherry", "orange", "kiwi", "mango"]
```

```
In [48]: thislist[1:-3] = ["Babar","Raju"]  
print(thislist)
```

```
['apple', 'Babar', 'Raju', 'orange', 'kiwi', 'mango']
```

```
In [50]: thislist = ["apple", "banana", "cherry"]
```

```
In [52]: thislist[1:2] = ["Black", "Red"]  
print(thislist)
```

```
['apple', 'Black', 'Red', 'cherry']
```

```
In [54]: thislist = ["apple", "banana", "cherry"]
```

```
In [58]: thislist[1:3] = ["watermelon"]  
print(thislist)
```

```
['apple', 'watermelon']
```

```
In [62]: thislist = ["apple", "banana", "cherry", "orange", "kiwi", "mango"]
```

```
In [66]: thislist[3:6] = ["Watermelon"]  
print(thislist)
```

```
['apple', 'banana', 'cherry', 'Watermelon', 'e', 'r', 'm', 'e', 'l', 'o',  
'n']
```

```
In [84]: thislist[1:4] = ["Watermelon"]  
thislist
```

```
Out[84]: ['apple', 'Watermelon']
```

```
In [78]: listx = ["apple", "banana", "cherry", "apple", "cherry"]
```

```
In [90]: listx[3:7] = ["BAbar"]  
listx
```

```
Out[90]: ['apple', 'BAbar', 'BAbar']
```

```
In [94]: thislist = ["apple", "banana", "cherry"]
```

```
In [98]: thislist.insert(2, "Watermelon")  
thislist
```

```
Out[98]: ['apple', 'banana', 'Watermelon', 'cherry']
```

```
In [100... thislist.append("Orange")  
thislist
```

```
Out[100... ['apple', 'banana', 'Watermelon', 'cherry', 'Orange']
```

```
In [102... len(thislist)
```

```
Out[102... 5
```

```
In [104... thislist = ["apple", "banana", "cherry"]  
tropical = ["mango", "pineapple", "papaya"]
```

```
In [108... tropical.extend(thislist)  
print(tropical)
```

```
['mango', 'pineapple', 'papaya', 'apple', 'banana', 'cherry', 'apple', 'ba  
nana', 'cherry']
```

```
In [ ]:
```

## Remove Specified Item

```
In [111... thislist = ["apple", "banana", "cherry"]
```

```
In [113... thislist.remove("banana")  
thislist
```

```
Out[113... ['apple', 'cherry']
```

```
In [115... thislist.append("Babar")
```

```
In [117... thislist
```

```
Out[117... ['apple', 'cherry', 'Babar']
```

```
In [121... thislist.remove("Babar")
```

```
In [123... thislist = ["apple", "banana", "cherry", "banana", "kiwi"]
```

```
In [125... thislist.remove("banana")
```

```
In [127... print(thislist)
['apple', 'cherry', 'banana', 'kiwi']
```

```
In [129... thislist = ["apple", "banana", "cherry", "banana", "kiwi"]
```

```
In [131... thislist.pop()
```

```
Out[131... 'kiwi'
```

```
In [ ]:
```

```
In [133... print(thislist)
['apple', 'banana', 'cherry', 'banana']
```

```
In [135... thislist.pop(2)
```

```
Out[135... 'cherry'
```

```
In [137... print(thislist)
['apple', 'banana', 'banana']
```

```
In [149... thislist = ["apple", "banana", "cherry"]
thislist
```

```
Out[149... ['apple', 'banana', 'cherry']
```

```
In [ ]:
```

```
In [151... del thislist[1]
print(thislist)
['apple', 'cherry']
```

```
In [ ]:
```

```
In [147... thislist = ["apple", "banana", "cherry"]
del thislist[1]
print(thislist)
['apple', 'cherry']
```

```
In [153... thislist.clear()
```

```
In [155... print(thislist)

[]
```

```
In [157... thislist = ["apple", "banana", "cherry"]
thislist
```

```
Out[157... ['apple', 'banana', 'cherry']
```

```
In [161... thislist[:]
```

```
Out[161... ['apple', 'banana', 'cherry']
```

```
In [163... mylist = thislist[:]
print(mylist)

['apple', 'banana', 'cherry']
```

```
In [1]: global = "text"
global
```

```
Cell In[1], line 1
    global = "text"
    ^
SyntaxError: invalid syntax
```

```
In [3]: 1vr = 2
1vr
```

```
Cell In[3], line 1
    1vr = 2
    ^
SyntaxError: invalid decimal literal
```

```
In [5]: var-1 = 2
print(var-1)
```

```
Cell In[5], line 1
    var-1 = 2
    ^
SyntaxError: cannot assign to expression here. Maybe you meant '==' instead of '='?
```

```
In [18]: var = "Python"
print(type({var}))

<class 'set'>
```

```
In [ ]:
```

```
In [13]: print(x//y)
```

```
-----  
NameError                                Traceback (most recent call las  
t)  
Cell In[13], line 1  
----> 1 print(x//y)  
  
NameError: name 'x' is not defined
```

```
In [20]: thislist = ["apple", "banana", "cherry"]  
thislist
```

```
Out[20]: ['apple', 'banana', 'cherry']
```

```
In [28]: print(thislist.pop)  
  
<built-in method pop of list object at 0x1363e28c0>
```

```
In [30]: var = 3.9  
var
```

```
Out[30]: 3.9
```

```
In [32]: int(3.9)
```

```
Out[32]: 3
```

```
In [44]: str = thislist = ""Ault'kelly""  
print(str)  
  
Ault'kelly
```

```
In [48]: aTuple = (1, 'Jhon', 1+3j)  
aTuple
```

```
Out[48]: (1, 'Jhon', (1+3j))
```

```
In [62]: print(type(10))  
  
<class 'int'>
```

```
In [66]: x = "Hello"  
x
```

```
Out[66]: 'Hello'
```

```
In [70]: x=3.14  
print(type(x))  
  
<class 'float'>
```

```
In [80]: x = {"a", "b", "c"}  
y = {"b", "c", "d"}
```

```
z = x & y
print(z)
```

```
{'c', 'b'}
```

```
In [84]: x = 10
         y = 20
         x, y = y, x
         print(x, y)
```

```
20 10
```

```
In [86]: x = {"a": 1, "b": 2}
         y = {"b": 3, "c": 4}
         z = {**x, **y}
         print(z)
```

```
{'a': 1, 'b': 3, 'c': 4}
```

```
In [88]: x = "hello"
         y = x.replace("l", "L", 1)
         print(y)
```

```
heLlo
```

```
In [92]: x = [1, 2, 3]
         y = x[:]
         x[0] = 4
         print(y)
```

```
[1, 2, 3]
```

```
In [ ]:
```

```
In [94]: x = [1, 2, 3]
         x.insert(1, 4)
         print(x)
```

```
[1, 4, 2, 3]
```

```
In [96]: x = {"a", "b", "c"}
         y = x - {"b"}
         print(y)
```

```
{'a', 'c'}
```

```
In [1]: l1 = [12, 13, 14, 15]
         l1
```

```
Out[1]: [12, 13, 14, 15]
```

```
In [3]: l1.insert(0, 11)
         print(l1)
```

```
[11, 12, 13, 14, 15]
```

# Questions

In [16]: 12th Question doubt

```
Cell In[16], line 1
    12th Question doubt
    ^
SyntaxError: invalid decimal literal
```

In [ ]: 44th Question

In [ ]: 78th Question

In [ ]: 80th Question

# Copy List

```
In [10]: mylist = [1,2,3,4,5]
mylist
```

Out[10]: [1, 2, 3, 4, 5]

```
In [12]: mylist_2 = [6,7,8,9,10]
mylist_2
```

Out[12]: [6, 7, 8, 9, 10]

# Use the copy() method

# Use the copy() method

```
In [17]: thislist = ["apple", "banana", "cherry"]
mylist = thislist.copy()
print(mylist)
```

['apple', 'banana', 'cherry']

# Use the list() method

```
In [22]: thislist = ["apple", "banana", "cherry"]
thislist
```

Out[22]: ['apple', 'banana', 'cherry']



```
In [24]: newlist = list(thislist)
        print(newlist)

['apple', 'banana', 'cherry']
```

## Use the slice Operator

```
In [29]: thislist = ["apple", "banana", "cherry"]
        thislist
```

```
Out[29]: ['apple', 'banana', 'cherry']
```

```
In [33]: mylist = thislist[:]
        print(mylist)

['apple', 'banana', 'cherry']
```

## List Membership

```
In [36]: list = [1,2,3,4,5,6,7,8]
        list
```

```
Out[36]: [1, 2, 3, 4, 5, 6, 7, 8]
```

```
In [38]: '1' in list
```

```
Out[38]: False
```

```
In [40]: 1 in list
```

```
Out[40]: True
```

```
In [42]: list.count(3)
```

```
Out[42]: 1
```

## Reverse & Sort List

```
In [45]: fruits = ['apple', 'banana', 'cherry']
        fruits.reverse()
```

```
In [47]: print(fruits)

['cherry', 'banana', 'apple']
```

```
In [49]: fruits = ['apple', 'banana', 'cherry']
fruit = fruits[::-1]
print(fruit)

['cherry', 'banana', 'apple']
```

## List sort() Method

```
In [52]: cars = ['Ford', 'BMW', 'Volvo']
cars
```

```
Out[52]: ['Ford', 'BMW', 'Volvo']
```

```
In [60]: cars.sort()
print(cars)

['BMW', 'Ford', 'Volvo']
```

```
In [68]: cars.sort(reverse=True)
print(cars)

['Volvo', 'Ford', 'BMW']
```

```
In [ ]:
```

## Loop Through a List

```
In [71]: thislist = ["apple", "banana", "cherry"]
thislist
```

```
Out[71]: ['apple', 'banana', 'cherry']
```

```
In [79]: for x in thislist:
          print(x)
```

```
apple
banana
cherry
```

## Using a While Loop

```
In [3]: thislist = ["apple", "banana", "cherry"]
i = 0
while i < len(thislist):
    print(thislist[i])
```

```
i = i + 1
```

apple  
banana  
cherry

## Using enumerate()

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

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

```
In [5]: for indx, val in enumerate(a):  
        print(indx, val)
```

```
0 1  
1 3  
2 5  
3 7  
4 9
```

```
In [ ]:
```

```
In [ ]:
```

```
In [ ]:
```