list creation

```
In [1]: list1=[]
```

```
In [2]: print(type(list))
```
<class 'type'>

```
In [3]: list2=[10,20,30]
```

```
In [4]: list3=[10.77,30.66,60.89]
```

```
In [6]: list4=['one','two','three']
```

```
In [7]: list5=['san',25,[50,100],[100,150]]
```

```
In [8]: list6=[100,'san',17.65]
```

```
In [10]: list7=['san',25,[50,100],[150,90],{'nil','sanku'}]
```

```
In [12]: len(list6)
```
Out[12]: 3

list indexing

```
In [13]: list2[0]
```
Out[13]: 10

```
In [14]: list4[0]
```
Out[14]: 'one'

```
In [15]: list4[0][0]
```
Out[15]: 'o'

```
In [16]: list4[-1]
```
Out[16]: 'three'

```
In [17]: list5[-1]
```
Out[17]: [100, 150]

list slicing

```
In [18]: mylist=['one','two','three','four','five','six','seven','eight']
```

```
In [19]: mylist[0:3]
```

Out[19]: ['one', 'two', 'three']

```
In [20]: mylist[:3]
```

Out[20]: ['one', 'two', 'three']

```
In [21]: mylist[:2]
```

Out[21]: ['one', 'two']

```
In [22]: mylist[-3:]
```

Out[22]: ['six', 'seven', 'eight']

```
In [23]: mylist[+2:]
```

Out[23]: ['three', 'four', 'five', 'six', 'seven', 'eight']

```
In [25]: mylist[-1]
```

Out[25]: 'eight'

```
In [26]: mylist[:]
```

Out[26]: ['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight']

Add,Remove And Change Item

```
In [27]: mylist
```

Out[27]: ['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight']

```
In [30]: mylist.append('nine')
         mylist
```

Out[30]: ['one',
          'two',
          'three',
          'four',
          'five',
          'six',
          'seven',
          'eight',
          'nine',
          'nine']

```
In [32]: mylist.insert(9,'TEN')
         mylist
```

```
Out[32]:  ['one',
           'two',
           'three',
           'four',
           'five',
           'six',
           'seven',
           'eight',
           'nine',
           'TEN',
           'TEN',
           'nine']

In [33]:  mylist.insert(1,'ONE')
          mylist

Out[33]:  ['one',
           'ONE',
           'two',
           'three',
           'four',
           'five',
           'six',
           'seven',
           'eight',
           'nine',
           'TEN',
           'TEN',
           'nine']

In [34]:  mylist.remove('one')
          mylist

Out[34]:  ['ONE',
           'two',
           'three',
           'four',
           'five',
           'six',
           'seven',
           'eight',
           'nine',
           'TEN',
           'TEN',
           'nine']

In [35]:  mylist.pop()
          mylist
```

```
Out[35]: ['ONE',
 'two',
 'three',
 'four',
 'five',
 'six',
 'seven',
 'eight',
 'nine',
 'TEN',
 'TEN']
```

```
In [36]: mylist.pop(8)
mylist
```

```
Out[36]: ['ONE', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'TEN', 'TEN']
```

```
In [39]: del mylist[7]
mylist
```

```
Out[39]: ['ONE', 'two', 'three', 'four', 'five', 'six', 'seven', 'TEN', 'TEN']
```

```
In [40]: mylist[0]=1
mylist[1]=2
mylist[2]=3
mylist
```

```
Out[40]: [1, 2, 3, 'four', 'five', 'six', 'seven', 'TEN', 'TEN']
```

```
In [41]: mylist.clear()
mylist
```

```
Out[41]: []
```

```
In [42]: del mylist
mylist
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[42], line 2
      1 del mylist
----> 2 mylist

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

Copy List

```
In [43]: mylist=['one','two','three','four','five','six','seven','eight']
```

```
In [44]: mylist1=mylist
```

```
In [45]: id(mylist),id(mylist1)
```

```
Out[45]:  (1926605426816, 1926605426816)
```

```
In [46]:  mylist2=mylist.copy()
```

```
In [47]:  id(mylist2)
```

```
Out[47]:  1926605030464
```

```
In [48]:  mylist[0]
```

```
Out[48]:  'one'
```

```
In [49]:  mylist
```

```
Out[49]:  ['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight']
```

```
In [50]:  mylist2
```

```
Out[50]:  ['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight']
```

Join list

```
In [54]:  list1=['one','two','three']
          list2=['four','five','six']
```

```
In [56]:  list3= list1 + list2
          list3
```

```
Out[56]:  ['one', 'two', 'three', 'four', 'five', 'six']
```

```
In [57]:  list1.extend(list2)
          list1
```

```
Out[57]:  ['one', 'two', 'three', 'four', 'five', 'six']
```

List Membership

```
In [58]:  list1
```

```
Out[58]:  ['one', 'two', 'three', 'four', 'five', 'six']
```

```
In [59]:  'one' in list1
```

```
Out[59]:  True
```

```
In [60]:  'ten' in list1
```

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

```
In [62]:  if 'three' in list1:
              print('three is presemt in list')
```

```
    else:
        print('three is not present in list')
```

three is presemt in list

In [63]:
```
if 'seven' in list1:
    print('seven is presemt in list')
else:
    print('seven is not present in list')
```

seven is not present in list

In [64]:
```
if 'eleven' in list1:
    print('eleven is presemt in list')
else:
    print('eleven is not present in list')
```

eleven is not present in list

Reverse and short list

In [65]:
```
list1
```

Out[65]: ['one', 'two', 'three', 'four', 'five', 'six']

In [66]:
```
list1.reverse()
list1
```

Out[66]: ['six', 'five', 'four', 'three', 'two', 'one']

In [71]:
```
list1=list1[::-1]
list1
```

Out[71]: ['one', 'two', 'three', 'four', 'five', 'six']

In [72]:
```
mylist3=[1,2,3,4,5,6]
mylist3.sort()
mylist3
```

Out[72]: [1, 2, 3, 4, 5, 6]

In [77]:
```
mylist3=[1,2,3,4,5,6]
mylist3.sort(reverse=False)
mylist3
```

Out[77]: [1, 2, 3, 4, 5, 6]

In [79]:
```
mylist4=[55,22,33,44,55]
sorted(mylist4)
```

Out[79]: [22, 33, 44, 55, 55]

Loop Through a list

```
In [80]: list1
```

Out[80]: ['one', 'two', 'three', 'four', 'five', 'six']

```
In [81]: for i in list1:
             print(i)
```

one
two
three
four
five
six

```
In [82]: for i in enumerate(list1):
             print(i)
```

(0, 'one')
(1, 'two')
(2, 'three')
(3, 'four')
(4, 'five')
(5, 'six')

Count

```
In [83]: list10=['one', 'two', 'three', 'four','one','one','two','three' ]
```

```
In [88]: list10.count('one')
```

Out[88]: 3

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

```
In [ ]:
```

```
In [ ]:
```