```
In [2]:   #PYTHON LIST CODE
          li1=[] #empty list
```

```
In [3]:   print(type(li1))
```

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

```
In [4]:   li2=[3,5,6] #integer list
```

```
In [5]:   li3=[2.7,5.3,65.12]  #float list
```

```
In [6]:   li4=['abc','def','ghi']    #string list
```

```
In [7]:   li5=['mmm',23,[10,20],[50,80]]  #nested list
```

```
In [8]:   li6=[47,12.35,'kkk']    #mixed datatype list
```

```
In [9]:   len(li6)
```

Out[9]: 3

```
In [10]:  print(li2)
```

[3, 5, 6]

```
In [11]:  li2[1]
```

Out[11]: 5

```
In [12]:  li3[-1]
```

Out[12]: 65.12

```
In [13]:  li4[:]
```

Out[13]: ['abc', 'def', 'ghi']

```
In [14]:  li5[:]
```

Out[14]: ['mmm', 23, [10, 20], [50, 80]]

```
In [15]:  li5[-2]
```

Out[15]: [10, 20]

LIST SLICING

```
In [16]:  mylist=["aa","bb","cc","dd","ee","ff","gg","hh"]
```

```
In [17]:  mylist[0:4]
```

```
Out[17]: ['aa', 'bb', 'cc', 'dd']

In [18]: mylist[2:6]

Out[18]: ['cc', 'dd', 'ee', 'ff']

In [19]: mylist[:3]

Out[19]: ['aa', 'bb', 'cc']

In [20]: mylist[-5:]

Out[20]: ['dd', 'ee', 'ff', 'gg', 'hh']

In [21]: mylist[:-3]

Out[21]: ['aa', 'bb', 'cc', 'dd', 'ee']

In [22]: mylist[-2:]

Out[22]: ['gg', 'hh']

In [23]: mylist[:]

Out[23]: ['aa', 'bb', 'cc', 'dd', 'ee', 'ff', 'gg', 'hh']

In [24]: mylist[-1]

Out[24]: 'hh'
```

ADD,REMOVE AND CHANGE ITEMS

```
In [25]: mylist

Out[25]: ['aa', 'bb', 'cc', 'dd', 'ee', 'ff', 'gg', 'hh']

In [26]: mylist.append('ii')
         mylist

Out[26]: ['aa', 'bb', 'cc', 'dd', 'ee', 'ff', 'gg', 'hh', 'ii']

In [27]: mylist.insert(0,'zzz')
         mylist

Out[27]: ['zzz', 'aa', 'bb', 'cc', 'dd', 'ee', 'ff', 'gg', 'hh', 'ii']

In [28]: mylist.insert(1,'AAA')
         mylist

Out[28]: ['zzz', 'AAA', 'aa', 'bb', 'cc', 'dd', 'ee', 'ff', 'gg', 'hh', 'ii']
```

```
In [29]:  len(mylist)

Out[29]:  11

In [30]:  mylist

Out[30]:  ['zzz', 'AAA', 'aa', 'bb', 'cc', 'dd', 'ee', 'ff', 'gg', 'hh', 'ii']

In [31]:  mylist.remove('AAA')
          mylist

Out[31]:  ['zzz', 'aa', 'bb', 'cc', 'dd', 'ee', 'ff', 'gg', 'hh', 'ii']

In [32]:  mylist.pop()
          mylist

Out[32]:  ['zzz', 'aa', 'bb', 'cc', 'dd', 'ee', 'ff', 'gg', 'hh']

In [33]:  mylist.pop(1)

Out[33]:  'aa'

In [34]:  del mylist[0]

In [35]:  mylist

Out[35]:  ['bb', 'cc', 'dd', 'ee', 'ff', 'gg', 'hh']

In [36]:  mylist[0]=1
          mylist[1]=2
          mylist

Out[36]:  [1, 2, 'dd', 'ee', 'ff', 'gg', 'hh']

In [38]:  mylist.clear()
          mylist

Out[38]:  []

In [39]:  del mylist
          mylist
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[39], line 2
      1 del mylist
----> 2 mylist

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

```
In [42]:  mylist=['aa','bb','cc']
```

```
mylist
```

Out[42]: ['aa', 'bb', 'cc']

In [44]: `lis=mylist`

In [46]: `id(lis),id(mylist)`

Out[46]: (2657072619392, 2657072619392)

In [47]: `mylist1=mylist.copy()`

In [48]: `id(mylist),id(mylist1)`

Out[48]: (2657072619392, 2657072619904)

In [49]:
```
mylist[0]=1
mylist
```

Out[49]: [1, 'bb', 'cc']

In [50]: `mylist1`

Out[50]: ['aa', 'bb', 'cc']

In [ ]:
```
mylist2=['dd','ee','ff']
mylist2
```

Out[ ]: ['dd', 'ee', 'ff']

In [52]:
```
mylist3=mylist1+mylist2
mylist3
```

Out[52]: ['aa', 'bb', 'cc', 'dd', 'ee', 'ff']

In [54]:
```
mylist1.extend(mylist2)
mylist1
```

Out[54]: ['aa', 'bb', 'cc', 'dd', 'ee', 'ff']

In [55]: `'aa'in mylist1`

Out[55]: True

In [56]: `'hh'in mylist1`

Out[56]: False

In [57]: `mylist1`

```
Out[57]: ['aa', 'bb', 'cc', 'dd', 'ee', 'ff']
```

```
In [ ]: mylist1.reverse()
        mylist1
```

```
Out[ ]: ['ff', 'ee', 'dd', 'cc', 'bb', 'aa']
```

```
In [59]: mylist1=mylist1[::-1]
         mylist1
```

```
Out[59]: ['aa', 'bb', 'cc', 'dd', 'ee', 'ff']
```

```
In [60]: l8=[4,2,8,45,21,81,12]
         l8.sort()
         l8
```

```
Out[60]: [2, 4, 8, 12, 21, 45, 81]
```

```
In [61]: l8.sort(reverse=True)
         l8
```

```
Out[61]: [81, 45, 21, 12, 8, 4, 2]
```

```
In [63]: mylist3
```

```
Out[63]: ['aa', 'bb', 'cc', 'dd', 'ee', 'ff']
```

```
In [64]: for i in mylist3:
             print(i)
```
```
aa
bb
cc
dd
ee
ff
```

```
In [65]: for i in enumerate(mylist3):
             print(i)
```
```
(0, 'aa')
(1, 'bb')
(2, 'cc')
(3, 'dd')
(4, 'ee')
(5, 'ff')
```

```
In [66]: mylist3.count('aa')
```

```
Out[66]: 1
```

```
In [67]: mylist3.count('mmm')
```

```
Out[67]:   0
```

```
In [68]:   l8
```

```
Out[68]:   [81, 45, 21, 12, 8, 4, 2]
```

```
In [69]:   all(l8)
```

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

```
In [71]:   l8.append(0)
           l8
```

```
Out[71]:   [81, 45, 21, 12, 8, 4, 2, 0, 0]
```

```
In [72]:   all(l8)
```

```
Out[72]:   False
```

```
In [73]:   any(l8)
```

```
Out[73]:   True
```