```python
list=[]
print(type(list))
<class 'list'>
list1=[10,40,30]
list2=[10.77,30.66,60.2]
list3=['ramu','raju','vani']

list5 = ['Asif', 25 ,[50, 200],[15, 90]] # Nested Lists
list6 = [100, 'Hello', 17.765] # List of mixed data types

len(list6)
list7 = ['Asif', 25 ,[50, 100],[150, 90] , {'John' , 'David'}]
len(list7)

5

list2[0] # Retreive first element of the list

10.77

list6[0]

100

list7[0][0]

'A'

list6[-1]
list5[-1]

[15, 90]
mylist = ['one' , 'two' , 'three' , 'four' , 'five' ]

mylist[:]

['one', 'two', 'three', 'four', 'five']

mylist[2:4]

['three', 'four']

mylist[3:]

['four', 'five']

mylist[:3]

['one', 'two', 'three']
```

```python
mylist[:-1]
```

```python
['one', 'two', 'three', 'four']
```

```python
mylist[:-3]
```

```python
['one', 'two']
```

```python
mylist[2:-1]
```

```python
['three', 'four']
```

```python
mylist.append('six')
mylist
```

```python
['one', 'two', 'three', 'four', 'five', 'six', 'ten', 'ten', 'six']
```

```python
mylist.insert(69,'ten')
mylist
```

```python
['one',
 'two',
 'three',
 'four',
 'five',
 'six',
 'ten',
 'ten',
 'six',
 'ten',
 'ten']
```

```python
mylist.insert(1,'ONE')
```

```python
mylist
```

```python
['one',
 'ONE',
 'two',
 'three',
 'four',
 'five',
 'six',
 'ten',
 'ten',
 'six',
 'ten',
 'ten']
```

```python
mylist.pop() # Remove last item of the list
mylist
```

```
['one',
 'ONE',
 'two',
 'three',
 'four',
 'five',
 'six',
 'ten',
 'ten',
 'six',
 'ten']
```

```
mylist.pop(3)
```

```
'three'
```

```
mylist[0] = 1
mylist[1] = 2
mylist[2]
```

```
'two'
```

```
mylist
```

```
[1, 2, 'two', 'four', 'five', 'six', 'ten', 'ten', 'six', 'ten']
```

```
mylist.remove(3)
mylist
```

```
---------------------------------------------------------------------------
-----
ValueError                                Traceback (most recent call
last)
Cell In[29], line 1
----> 1 mylist.remove(3)
      2 mylist

ValueError: list.remove(x): x not in list
```

```
mylist.remove('five')
mylist
```

```
[2, 'two', 'four', 'six', 'ten', 'ten', 'six', 'ten']
```

```
mylist
```

```
['one', 'two', 'three', 'four', 'five']
```

```
del mylist
```

```
mylist
```

```
----------------------------------------------------------------
-----
NameError                                    Traceback (most recent call
last)
Cell In[37], line 1
----> 1 mylist

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

```
list=[3,2,4]
list.clear()
list
```

```
[]
```

```
list=[3,2,4]
list1 = list # Create a new reference "mylist1"
```

```
id(list) , id(list1)
```

```
(1324689898560, 1324689898560)
```

```
list2 = list.copy()
```

```
id(list) ,id(list2)
```

```
(1324689898560, 1324689911936)
```

```
list3=list1+list
list3
```

```
[]
```

```
list1.extend(list2)
list1
```

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

```
'ten' in list1 #
```

```
False
```

```
2 in list1
```

```
True
```

```
list1.reverse()
```

```
list1
```

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

```python
list[::-1]
```

[3, 2, 4, 3, 2, 4]

```python
list1.sort()
list1
```

[2, 2, 3, 3, 4, 4]

```python
list1.sort(reverse=True)
```

```python
list1
```

[4, 4, 3, 3, 2, 2]

```python
list1.count(3)
```

2

```python
all(list1)
```

True

```python
any(list1)
```

True

```python
L2 = [1,2,3,4,True,False]
all(L2)
```

True

```python
any(L2)
```

True