Introduction to list

- List is a collection of **ordered objects** and **can have duplicates**
- It is created using **[ ]** and items inside are separated using a (**,**) comma
- A list have **+ve and -ve index** as well
- A list can be created in 2 ways that is

List1 = [1,2,3,4,5]
List2 = list((1,2,3,4,5))

```
>>>
>>> Mylist=['john', 'smith', 'mark', 'eric', 'smith']
>>> Mylist
['john', 'smith', 'mark', 'eric', 'smith']
>>> print(Mylist)
['john', 'smith', 'mark', 'eric', 'smith']
>>> list1=list(1,2,3,4,5)
Traceback (most recent call last):
  File "<pyshell#4>", line 1, in <module>
    list1=list(1,2,3,4,5)
TypeError: list expected at most 1 argument, got 5
>>>
>>> list1=list((1,2,3,4,5))
>>> list1
[1, 2, 3, 4, 5]
>>> Mylist
['john', 'smith', 'mark', 'eric', 'smith']
>>> Mylist[2]
'mark'
>>> Mylist[-2]
'eric'
>>>
```

- List is **heterogeneous** i.e, it can contain different type of data In it

Ex : Mylist = [‘John’, 15, 14.6, True , ‘Steven’, 5+7j]

- List is **mutable** [changeable] , you can change any value in a list
- **Len( )** given length of a list

```
>>> Mylist=[15, 9,12,18, 7,10]
>>> Mylist
[15, 9, 12, 18, 7, 10]
>>> Mylist[0]=30
>>> Mylist
[30, 9, 12, 18, 7, 10]
>>> Mylist[4]='john'
>>> Mylist
[30, 9, 12, 18, 'john', 10]
>>> len(Mylist)
6
>>>
```

- **Append( )** is used to add more values to a list

Ex : Mylist = [1,2,3,4,5,6]
Mylist.append(50)

O/p:
[1,2,3,4,5,6,50]