List

List is like a collection of lockers address i.e variables.

List is mutable i.e value of the list can be changed. If var = [1,2,3,4] then you can change or replace 3 with 10 by writing var[2] = 10

It can consist of different datatypes in it and can also have another list like [1,2,'hello',[1,2,3,4]]

I have explained the concepts of slicing and indexing in string so I am going to just show the values you get if you use it.(refer string notes if need).

list1 = [1,2,3,4,5,6]	

>>> list1 = [1,2,3,4,5,6]
>>> list1[2]
3
>>> list1[-1]
6
	Slicing of list

>>> list1[2:4]
[3, 4]
>>> list1[:5]
[1, 2, 3, 4, 5]
	Indexing of list

>>> len(list1) 6	Length of the list

>>> list1 = ['1','2','3','4','5','6']
>>> var = ' '.join(list1)
>>> var
'1 2 3 4 5 6'
>>> var = '@'.join(list1)
>>> var
'1@2@3@4@5@6'
	It will join the list with respect to the character defined in the syntax and return as string

>>> list1 = [1,2,3,4,5,6]
>>> var = str(list1)
>>> var
'[1, 2, 3, 4, 5, 6]'
	str() will convert the whole list into one string not each elements.

>>> var = 'Hello world'
>>> list2 = list(var)
>>> list2
['H', 'e', 'l', 'l', 'o', ' ', 'w', 'o', 'r', 'l','d']
	list() will convert the string into list with each characters as elements.

>>> list1
[1, 2, 3, 4, 5, 6]
>>> 4 in list1
True
>>> '4' in list1
False
	in will return True if the element is in the list which is of same datatype.

>>> list1
[1, 2, 3, 4, 5, 6]
>>> list1.append(8)
>>> list1
[1, 2, 3, 4, 5, 6, 8]
	append() will add the element to the last of the list.

>>> list1
[1, 2, 3, 4, 5, 6, 8]
>>> list1.insert(6,7)
>>> list1
[1, 2, 3, 4, 5, 6, 7, 8]
	insert(index,value) will add the value to the particular position in the list.

>>> list1
[1, 2, 3, 4, 5, 6, 7, 8]
>>> del list1[6]
>>> list1
[1, 2, 3, 4, 5, 6, 8]
	del will delete the particular element with respect to the list index

>>> list1
[1, 2, 3, 4, 5, 6, 8]
>>> list1.remove(2)
>>> list1
[1, 3, 4, 5, 6, 8]
>>> list1
[1, 3, 4, 5, 6, 8]
>>> list1.append(5)
>>> list1
[1, 3, 4, 5, 6, 8,5]
>>> list1.remove(5)
>>> list1
[1, 3, 4, 6, 8, 5]
	remove(value) will remove the particular value from the list. If there is two values in the list it will remove the first value.

>>> list1
[1, 3, 4, 6, 8, 5]
>>> list1.index(4)
2
	index(value) will return the index of the value in the list

>>> list1 = [1,2,3,4,5,6]
>>> three = list1.pop(2)
>>> three
3
	pop(index) will remove the value with respect to the index from the list and return it for assigning to variables.

>>> list1.reverse()
>>> list1
[6, 5, 4, 2, 1]
>>> list1.reverse()
>>> list1
[1, 2, 4, 5, 6]
	reverse() will reverse the elements of the list.

>>> list1 = [1,3,2,9,4]
>>> list1.sort()
>>> list1
[1, 2, 3, 4, 9]
	sort() will sort the list by ascending order as default

>>> list1 = [1,3,2,9,4]
>>> list1.sort(reverse=True)
>>> list1
[9, 4, 3, 2, 1]
	If you write reverse = True inside sort() then it will sort the list by descending order

>>> list1 = [1,3,2,9,4]
>>> list2 = sorted(list1)
>>> list2
[1, 2, 3, 4, 9]
>>> list2 =
sorted(list1,reverse=True)
>>> list2
[9, 4, 3, 2, 1]
	sorted() will return the sorted value of the list but original list will not be changed.