

**4.1.1****LIST OPERATIONS:**

1. ‘+’ Operator which concatenates two lists.

```
>>>list2=[1,2,3,4,5,6,7,8]
>>>list3=['Hello',3.5,'abc',4]
>>>print(list2+list3)
```

Output

1,2,3,4,5,6,7,8, ‘Hello’,3.5,’abc’,4

2. ‘\*’ Operator multiples the list to the specific numbers

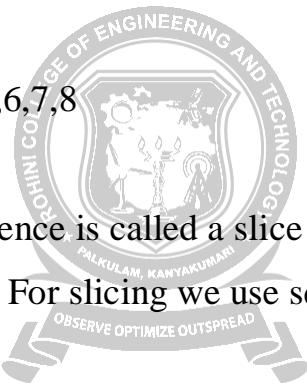
```
>>>list2=[1,2,3,4,5,6,7,8]
>>>list2*2
```

Output

1,2,3,4,5,6,7,8,1,2,3,4,5,6,7,8

**4.1.2 LIST SLICE**

A subsequence of a sequence is called a slice and the operation that extracts a subsequence is called slicing. For slicing we use square brackets [ ]. Two integer values splitted by ( : ).



Syntax:

List_Name[Starting_Value : Ending_Value]
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Ex:

```
>>>a=['a','b','c','d','e']
```

List	a=	‘a’	‘b’	‘c’	‘d’	‘e’
<b>Index from Left</b>		0	1	2	3	4
<b>Index from Right</b>		-5	-4	-3	-2	-1

```
>>>print(a[:]) → ['a', 'b', 'c', 'd', 'e'] #Prints ALL
>>> print(a[1:]) → ['b', 'c', 'd', 'e'] #Print from 1st Position to Last Position
```

```
>>> print(a[1:3]) → ['b', 'c'] #Print from 1st Position to Last
- 1 Position

>>> print(a[:-1]) → ['a', 'b', 'c', 'd'] #Print from Backwards except -
1th Position

>>> print(a[1:-1]) → ['b', 'c', 'd'] #Print from 1st Position till -1th
Position
```

### **4.1.3 LIST METHODS (or) TYPES OF FUNCTIONS IN LIST**

*Consider the values of list a and list b be*

```
>>>a=['apple', 'mango', 'lime']
>>>b=['grape']
```

S.No	Name	Syntax	Description	Example
1.	append()	listname.append()	The method append() will add the item to the end of a list	a.append('orange')
2.	insert()	listname.insert(index,item)	This method inserts an item at a particular place and two arguments (index,item)	a.insert(1,'banana')
3.	extend()	listname.extend(item1,item2)	This method is used to combine two list with the items in the argument.	a.extend(['grape']) (or) a.extend(b)
4.	remove()	listname.remove(item)	This method will remove an item in the list.	a.remove('apple')

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5.	pop()	listname.pop(index)	This method returns the item by the index position and removes it.	a.pop(1) >>>mango
6.	index()	listname.index(item )	This method will return index value of list and takes index value as argument.	a.index('lime') >>>2
7.	copy()	dest_list=listname.c opy()	This method is used to copy a list to another list.	c=a.copy() c=>[1,2,3]
8.	reverse()	listname.reverse()	This method is used to reverse the items in a list.	a.reverse() a=>[3,2,1]
9.	count()	listname.count(item )	This method is used to count the duplicate items in the list which takes the item as arguments.	a.count('lime') >>>1
10.	sort()	listname.sort()	This method is used to arrange the list from ascending to descending alphabetically.	a.sort() >>>a=['apple', 'lime', 'mango'] a=>['apple', 'lime', 'mango']
11.	clear()	listname.clear()	This method is used to clear all the values in the list.	a.clear() -->[]

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