Lists

Lists

- List is a collection of objects which can be of different data types.
- List is created using [ ] or using list command and elements are separated using ‘ , ’.
- Elements in list can occur more than once.
- Lists are mutable and therefore can be modified whenever required.

Methods in list:

Operator	Description	Syntax
append	Add an item to a list	l1.append(x)
extend	Add items of a list to other list	l1.extend(l2)
insert	Insert an item in a list at a given position.	l1.insert(n,x)
remove	Remove the first occurrence of an element	l1.remove(x)
pop	Remove the item at a given position. Removes last element if position is not specified.	l1.pop(n)

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Operator	Description	Syntax
clear	Removes all items from the list	l1.clear()
index	Returns the position of the element in the list	l1.index(x)
count	Return the number of times an element occurs in the list	l1.count(x)
sort	Sort the items of the list	l1.sort()
reverse	Reverse the elements of the list	l1.reverse()
copy	Creates copy of the list	l1.copy()

List Comprehension

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List comprehensions are used for creating new lists from other iterable like tuples, strings, arrays, lists, etc.
A list comprehension consists of brackets containing the expression, which is executed for each element along with the for loop to iterate over each element.

Advantages of List Comprehension

- More time-efficient and space-efficient than loops.
- Require fewer lines of code.
- Transforms iterative statement into a formula.

Syntax

[expression for element in iterable if condition]