

List part 2



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Agenda

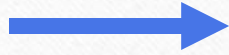
- **List method**
- **operator on list**
- **List of list**
- **Attributes of list**
- **List Comprehension**
- **Mutability and hashability**

List method

- **list()** method can take at most one argument.
- **One argument must be iterable.**

operator on list

- **Comparison operator on list**



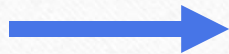
```
l1 = [40, 20, 30]  
l2 = [40, 20, 30]  
print(l1 == l2)
```

- **Concatenation operator on list**



```
l1 = [40, 20, 30]  
l2 = [40, 20, 30]  
print(l1+l2)
```

- **Repetition operator on list**



```
l1 = [40, 20, 30]  
print(l1*3)
```

List of list

```
l1 = [[1,2,3],[4,5,6],[7,8,9]]
```


All attributes of list

- **append()** → Adds an element at the end of the list.
- **insert()** → Inserts an element at the specified position in the list.
- **extend()** → Adds all elements of an iterable (like another list) to the end of the list
- **remove()** → Removes the first occurrence of the specified element from the list.
- **pop()** → Removes the element at the specified position from the list and returns it.
- **sort()** → Sorts the list in ascending order.
- **reverse()** → Reverses the order of the list.
- **index()** → Returns the index of first occurrence of the specified element in the list
- **count()** → Returns number of value in the list.
- **clear()** → Removes all elements from the list.

List Comprehension

[expression for variable in iterable]

Mutability and hashability

- **Mutable objects are changeable.**
- **Immutable objects are not changeable.**
- **All immutable objects are hashable. But not all hashable objects are immutable.**
- **Hashable is a feature of python objects that tells if the object has a hash value or not, If it has a hash value that dose not change during its entire lifetime.**
- **hash() is a predefine function**

Mutability and hashability

Class	Hashable	Mutable
int	Yes	No
float	Yes	No
complex	Yes	No
bool	Yes	No
str	Yes	No
range	Yes	No
list	No	Yes
tuple	Yes	No
set	No	Yes
dict	No	Yes