

# 08

## Python List

- Python List



# Array

An array is a collection of items stored at contiguous memory locations. The idea is to store multiple items of the same type together. This makes it easier to calculate the position of each element by simply adding an offset to a base value, i.e., the memory location of the first element of the array

For using array in python we have to import a array module  
we can import array module in many ways

```
import array
```

```
from array import *
```

```
import array as arr
```

Module Name

Class Name

```
array_var = array.array("type_code", [elements])
```

```
array_var = array("type_code", [elements])
```

```
array_var = arr.array("type_code", [elements])
```

# Array

Type code	C Type	Python Type	Minimum size in bytes
'b'	signed char	int	1
'B'	unsigned char	int	1
'u'	wchar_t	Unicode character	2
'h'	signed short	int	2
'H'	unsigned short	int	2
'i'	signed int	int	2
'I'	unsigned int	int	2
'l'	signed long	int	4
'L'	unsigned long	int	4
'q'	signed long long	int	8
'Q'	unsigned long long	int	8
'f'	float	float	4
'd'	double	float	8



# List

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Lists are used to store multiple items in a single variable.

Lists are one of 4 built-in data types in Python used to store collections of data, the other 3 are Tuple, Set, and Dictionary, all with different qualities and usage.

A list in Python is used to store the sequence of various types of data. Python lists are mutable type its mean we can modify its element after it created. However, Python consists of six data-types that are capable to store the sequences, but the most common and reliable type is the list.

A list can be defined as a collection of values or items of different types. The items in the list are separated with the comma (,) and enclosed with the square brackets [].

# Creating List

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```
list = ["rsuniverse", 1008, "ram" ]
```

```
list = list(["rsuniverse", 1008, "ram" ])
```

```
list = list(("rsuniverse", 1008, "ram" ))
```

# List Characteristics

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- The lists are ordered.
- The element of the list can access by index.
- The lists are the mutable type.
- List can be duplicate
- List are Mutable
- A list can store the number of various elements.



# List Characteristics

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## Ordered

When we say that lists are ordered, it means that the items have a defined order, and that order will not change.

If you add new items to a list, the new items will be placed at the end of the list.

## Changeable

The list is changeable, meaning that we can **change**, **add**, and **remove** items in a list after it has been created.

## Allow Duplicates

Since lists are indexed, lists can have items with the same value:

**del** : it's a keyword , which is used to delete variable, list. Tuple etc..

# Python List Methods

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Method	Syntax	Description
append()	list.append(val)	Adds an element at the end of the list
clear()		Removes all the elements from the list
copy()		Returns a copy of the list
count()	List.count(val)	Returns the number of elements with the specified value
extend()	list.extend(iterable)	Add the elements of a list (or any iterable), to the end of the current list
index()	list.index(val)	Returns the index of the first element with the specified value
insert()	list.insert(pos. elmnt)	Adds an element at the specified position
pop()	list.pop(pos)	Removes the element at the specified position
remove()	list.remove(elmnt)	Removes the item with the specified value
reverse()	list.reverse()	Reverses the order of the list
	list.sort()	
sort()	list.sort(reverse=True   False, key=myFunc)	Sorts the list
reversed()	reverse(sequence)	reverse the list



# Thanks for Reading



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