There are four collection of data types in the Python programming language:

* List is a collection which is ordered and changeable. Allows duplicate members.

## 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.

**Note:** There are some [list methods](https://www.w3schools.com/python/python_lists_methods.asp) that will change the order, but in general: the order of the items will not change.

## 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:

* [Tuple](https://www.w3schools.com/python/python_tuples.asp) is a collection which is ordered and unchangeable. Allows duplicate members.
* [Set](https://www.w3schools.com/python/python_sets.asp) is a collection which is unordered and unindexed. No duplicate members.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| TYPE | ORDERED | CHANGEABLE | DUPLICATE | indexed |  |
| LIST | YES | YES | YES | YES |  |
| TUPLE | YES | NO | YES | YES |  |
| DIC | NO(YES 3.7) | yes | NO | NO |  |
| set | NO | NO | NO | NO |  |

* [Dictionary](https://www.w3schools.com/python/python_dictionaries.asp) is a collection which is unordered and changeable.
* No duplicate members.

When choosing a collection type, it is useful to understand the properties of that type. Choosing the right type for a particular data set could mean retention of meaning, and, it could mean an increase in efficiency or security.

Lists

* list = ["apple", "banana", "cherry"]
* Lists are used to store multiple items in a single variable.
* List items are ordered, changeable, and allow duplicate values.
* List items are indexed, the first item has index [0], the second item has index [1] etc.
* 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.
* The list is changeable, meaning that we can change, add, and remove items in a list after it has been created.
* **TUPLE**
* tuple = ("apple", "banana", "cherry")
* Tuples are used to store multiple items in a single variable.
* A tuple is a collection which is ordered and **unchangeable**.
* Tuples are written with round brackets.
* Tuple items are ordered, unchangeable, and allow duplicate values.
* Tuple items are indexed, the first item has index [0], the second item has index [1] etc.

**Set**

set = {"apple", "banana", "cherry"}

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

A set is a collection which is both unordered and unindexed.

Sets are written with curly brackets.

**Once a set is created, you cannot change its items, but you can add new items.**

# Dictionaries

Dict = {"brand": "Ford","model": "Mustang","year": 1964}

Dictionaries are used to store data values in key : value pairs.

A dictionary is a collection which is ordered\*, changeable and does not allow duplicates.

As of Python version 3.7, dictionaries are ordered. In Python 3.6 and earlier, dictionaries are unordered.

Dictionaries are written with curly brackets, and have keys and values: