

## List

List is a data structure in python to store multiple heterogeneous(different type) values

- In list duplicate values are allowed to be stored
- It is represented by []
- It is mutable and iterable

|                       |   |
|-----------------------|---|
| lst.append(value)     | value will get added at the end and the length of the lst will be increased by 1<br>lst.append(10)<br>lst.append("xxxx")<br>lst.append([1,2,3])   |
| lst.extend(iterable)  | all the values from the iterable will get added one by one at the end of the list, and length of the list will get increased by length of the iterable  |
| lst.insert(pos,value) | the value will get added at the given position in the list, and all the previous values will be shifted one location on the right side  |
| lst.pop()             | in pop function if the position is not given then it will delete the last value, but if the position is given then it will delete the value at the given position<br>lst.pop()-> delete the last value<br>lst.pop(3)-> delete the value at 3 <sup>rd</sup> index position |
| lst.remove(value)     | it removes the first occurrence of the given value from the list, if it exists otherwise, it will throw an exception  |
| lst[pos]=data         | the value at the given position will be overwritten by data   |
| lst.count(value)      | It will display number of occurrence of the given value   |
| lst.clear()           | it will delete all the values from the lst, but empty list will remain  |
| lst.reverse()         | It reverse the original list  |
| lst.sort()            | it will sort the list in ascending order, if all the values in the list are of same type(homogeneous), otherwise it throws exception<br>lst.sort()-> arrange in the ascending order<br>lst.sort(reverse=True)-> arrange in the descending order                           |
| lst.copy()            | it creates a shallow copy of the given list<br>lst1=lst.copy() -> shallow copy of lst will be created and lst will point to it.   |
| lst.index(value)      | It displays the index position of the first occurrence of the given value, if it exists, otherwise it throws an exception   |
|                       |   |
|                       |   |

## Tuple

It allows to store multiple values in the tuple, duplicates are allowed.

1. It is immutable and iterable
2. It is represented in ()
3. It allows to store duplicate values
4. tuple is used to send variable number of parameters to a function
5. A function can return multiple values as a tuple

|                |   |
|----------------|---|
| t.count(value) | It will display number of occurrence of the given value   |
| t.index(value) | It displays the index position of the first occurrence of the given value, if it exists, otherwise it throws an exception |
| len(t)         | to find the length of tuple   |