Data Structures:

Python data structures are the way of organizing and sorting data so that they can be easily accessible and modifiable.

1. **List**s :
   - Lists in python are the sequentially data structures which stores heterogeneous elements in a single variable
   - We use **[]** or **list()** to declare a list in python.
   - Lists in python are mutable.
   - Lists maintain the insertion order.
   - We can access the list elements by indexes (index starts from 0).
   - We can perform several operations on lists using lists methods like **append(), insert(), delete() , etc.**

     - **append(**x**):** this method takes adding an element as a parameter and adds the element to the end of the list.
     - **insert(** i, x **) :** this method takes two inputs, one is the position where we want to insert an element and another one is the element to be inserted.
     - **remove(** x **):** remove the first occurrence of an element whose value is equals to x.
     - **pop() :** remove the last element from a list.
     - **clear() :** remove all elements from the lists.
     - **count(** x **) :** return the number of times the element occurs in the list.
     - **sort(** *, key=none, reverse=false **) :** sort the list in place
     - **reverse():** reverse the list.
     - **copy() :** return the shallow copy of the list

```
fruits = ['orange', 'apple', 'pear', 'banana', 'kiwi', 'apple', 'banana']
fruits.count('apple')
>> 2
fruits.index('banana')
>> 3
fruits.index('banana', 4)  # Find next banana starting at position 4
>> 6
fruits.reverse()
fruits.append('grape')
>> ['orange', 'apple', 'pear', 'banana', 'kiwi', 'apple', 'banana', ‘grape’]
fruits.sort()

fruits.pop()
```