**Built in data types:**

List, tuple, set, dictionary

1. **List:**

list is used to store the multiple values.

List items: list items are ordered, changeable, and duplicates are allowed.

* Ordered: ordered means having specific order that order will not change if we add element. The newest element will be placed at the end.
* Changeable: changeable means the list are mutable that mens we can add delete replace the element in the list.
* Allow duplicates: means duplicate elements are allowed in the list.
* List can contain different types of data types.

1. **Tuple:**

Tuples are immutable(unchangeable), ordered, duplicates are allowed.

1. **Set:**

Sets are changeable, unordered, no duplicates allowed.

Frozen sets are unchangeable.

1. **Dictionary:**

Dictionary is ordered changeable but no duplicates are allowed.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Na | operation | list | tuple | Set | Frozen set | Dictionary |
| 1 | repetition | allowed | Allowed | Not allowed | Not allowed | Not allowed |
| 2 | mutable | yes | immutable | mutable | immutable | mutable |
| 3 | Ordered | yes | yes | nope | nope | yes |
| 4 | Represented by | [] | () | {} | {} | {} |

Difference between built in data types.

**Operation on list:**

1. **Access list items:**

To access list items in mylst

1. Mylst[2:4] #item at the position 3rd and 4th will be printed as the list index is starts from 0 (4 means 5th item will not be included
2. Mylst[2:] #items from 3rd position to the last item will be printed.
3. Mylst[:4] #items from start to 5th position will be printed.
4. To search element in a list

If “mango” in mylst:

Print(“yes”)

1. **Change list-item values:**

mylst=["apple","banana", "cherry","orange","mango","kiwi","watermelon"]

mylst[1]="guava"#replacing item at 2nd place

print(mylst)

mylst[1:3]=["blackcurrent","jamun"]#replacing item at 2nd and 3rd position.

print(mylst)

mylst[2:4]=["grapes"]#replacing items at 3 and 4 with one value only so total items will be reduced by 1.

print(mylst)

#insert item

#without replacing value we can insert a value.

mylst.insert(3,"chiku")

print(mylst)

1. **Add list items:**
2. Append():
   1. Adding element at last:
   2. Lst.append(“mango”)
3. Inserting element at any position
   1. Lst.insert(2,“orange”)#orange will be inserted at 3rd position.
4. Extend list :
   1. Suppose two lists are there l1,l2
   2. L1.extend(l2)#adding list 12 in l1, l2 can be any leteral.
5. **Remove list items:**
6. Remove specific item:
   1. Lst.remove(“banana”) #if you have multiple values still it will remove the first value from starting index only.
7. Removed item according to its index:
   1. Lst.pop() #it will remove last item.
   2. Lst.pop(1) # will remove item at 0th index.
8. Clear the list:
   1. Lst.clear() #It will clear the list.