

Difference of Sets, List, Tuple and Dictionary

Type Name	Sets	List	Tuple	Dictionary	Remarks
	Set_A = {‘a’,1,2,‘c’}	List_A= [1,‘ab’,‘name’]	Tuple= (‘hari’,30,‘kiwi’)	Fruits = { ‘mango’:20, ‘kiwi’: 10, ‘Litchi’:40 }	Declaration
Order	No fixed order	Maintain Order	Maintain Order	a/c to python 3.7, Orders is initialized	It allows us to kept elements in order
Indexing	No index-based mechanism	Integer based indexing starting from 0	Integer based indexing starting from 0	Key-based indexing	Indexing is done according to elements place.
Duplication	Does not allow duplicate data	Allows duplication of data	Allows duplication of data	Keys are unique, values can be duplicate	Set & Dict are not able to duplicate data
Adding Elements	Use add() method	Use append() method	Being immutable, new data cannot be added	Uses key-value pairs	Only tuple does not support insertion
Mutability	Mutable, but elements inside must be immutable	Mutable	Mutable	Keys are mutable, value cannot be changed	Mutable aids on changing values or elements
Slicing	No slicing	Slicing	Slicing	No slicing	
Deleting	Uses pop() method	Uses pop() method	Being immutable, deleting is not possible	Uses pop(key) method to remove specified key-value pair	Deleting performs the removing of values

Common String Methods:

Methods	Functions
.Upper()	Upper case a string
.Lower()	Lower case a string
.split()	Split a string at specified separator
.strip()	Return trimmed version of the string
.replace()	Returns a string where a specified value is replaced with a specified value
.endswith()	Returns True if the string ends with specified value
.isdigit()	Returns True if all characters in the string are digits

List Methods:

Methods	Functions
.append()	Methods to add an item to the end of the list
.insert()	Methods to add an item to list at a specified index
.extend()	Methods to append elements from another list to the current list
.remove()	To remove the specified item using the item name
.pop()	To remove the list item using index. By default pop takes up the last index.
.reverse()	Method to reverse list
.sort()	To sort the string either in ascending and descending order.

Sets Methods:

Methods	Functions
.add()	To add a new elements to a set
.remove()	To remove item from a set
.pop()	To remove item from a set and returns removed item
.union()	It returns a set of containing union of sets
.intersection()	Method that returns a set that is intersection of 2 other sets
.difference()	Method that returns a set containing difference between two or more sets.

Tuples Methods:

Method	Functions
.count()	It returns number of times a specified value occurs in a tuple
.index()	It returns index of specified value in tuple.

Dictionary Methods:

Method	Functions
.get()	Returns the value of the specified key
.keys()	Returns a list of containing the dictionary's keys
.values()	Returns a list of all the values in the dictionary
.items()	Returns a list containing a tuple of each key-value pairs
.update()	Updates the dictionary with the specified key-value pairs
.pop()	Removes the elements with the specified key
.clear()	Removes all the elements from the dictionary
.copy()	Returns a copy of the dictionary
.fromkeys()	Returns a dictionary with the specified keys and value
.setdefault()	Returns the value of the specified key.
.update()	It updates the dictionary with the specified key-value pairs
.popitems()	It removes the last inserted key-value pair.