Data Structure used in Python

1. **How many operation perform in different data structure in Python?**

Ans1- We can perform operation like- creating a data structure, updating data structure, deleting data structure, accessing data structure, Indexing, Slicing, and Matrixes into data structure.

2. **What is the similarities and difference between list and tuple data structure in python?**

Ans2- Similarities:

Tuple	**List**
Tuple are used to store data.	List also used to store data.
Tuple used to store heterogeneous data.	List also used to heterogenous data.
Tuple used to store sequential data	List also used to store sequential data.

Difference:

Tuple	**List**
Tuple is more memory efficient as compared to list.	List is less memory efficient as compared to list.
Tuple items are immutable.	List item are mutable.
You can't change tuple item.	You can change list item.
Ex- tuple = ('apple', 23, 'banana', 97, 3.5);	list = ['apple', 23, 'banana', 97, 3.5];

3. **How many types of data structure used in python?**

Ans3- Data structure used in python: There are four main data structure used in python.

- **Tuple-**This is heterogeneous data type which is immutable data type.Tuple is ordered collection.They allow duplicate items. Tuple declared within parenthesis().

Ex- tuple=(x,6,6.7)

X=tuple(items)

print(X)

- **List-** Can be declare multiple data type into single variable.List is mutable but ordered can't be change.Enclosed with square brackets.

  Ex- List=[4,"true",5.8,9]

Dictionary-Dictionary is a collection of heterogeneous data type. Dictionary is key:value pair. This is immutable and does not allow duplicates, which is enclosed with {}.

Ex-Dic={"sub1":50,"sub2":60…….}

where sub1,sub2=key;

and 50,60 =value;

- **Set-**Set is unordered and unindexed.Set is a collection of heterogeneous data type, which is immutable and does not allow duplicates and enclosed with {}.

  Ex-set={"hello",5,9,5.6,99, true}

4. Delete index value 4 from following given list.

list1 = ['apple', 23, 24, 'mango', 56, 43, 'banana' 19];

Ans4- Given list-

list1 = ['apple', 23, 24, 'mango', 56, 43, 'banana'19];

print list1

del list1[4];

print (list1)