**Data structures:**

There are two types of data structures, in built & user defined data structures.

Built in data structures: As the name suggests, these are the built in python which stores data given by the programmer and makes easy to access and faster.

INT, FLOATING POINT, STRING, LIST, DICTONARIES, TUPLES, SETS, BOOLEAN

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| --- | --- | --- | --- | --- |
| S.NO | LIST | TUPLES | DICTONARIES | SETS |
| 1 | Lists are used to store data of different types.  Lists are mutable | Tuples are same as the lists only exception is that once the tuple is created it cannot be changed.  Tuples are immutable. | Dictionaries are used to store data of different types in the form of keys and values.  Dic are immutable but unordered | Sets are collection of unordered elements that are unique. Even if the data is repeated it cannot be entered into the set more than once.  Sets are mutable and unordered |
| 2 | Syntax: List = [] | Syntax: Tup= [] | Syntax: Dic = {  ‘keys’: ‘values’} | Syntax: Set= {} |
| 3 | There are addresses assigned to every element which is called as indexing. | There are addresses assigned to every element which is called as indexing. | Indexing & slicing is not possible. | Indexing & slicing is not possible |
| 4 | Both positive and negative indexing is possible. | Both positive and negative indexing is possible. | --- | ----- |
| 5 | Adding in the list can be done by using append (), insert (), extend (). | Adding in the list can be done by using append (), insert (), extend (). | Changing & adding can be done by using keys. If you change the key then automatically value will change. | To add elements will use add() function |
| 6 | Removing elements can be done by using del (), clear (), pop (). | Removing elements can be done by using del (), clear (), pop (). | Removing elements can be done by using clear (), pop (). | Operations in sets can be done by using union , intersection, difference, symmetric difference |
| 7 | Accessing elements can be done by using indexing | Accessing elements can be done by using indexing | Accessing elements can be done by using keys or get() function | Union () function combines the data present in both the sets.  Intersection () finds the data present in both the sets. |