→ Data structure is a way of storing data so that it can be accessed and organized in an efficient manner

→ Types of data structures in python:

a. List [ ]
b. Tuple ( )
c. Set { }
d. Dict {key, value}

→

	list	tuple	set	dict
	[ ]	( )	{ }	{key, value}
	heterogeneous	heterogeneous	heterogeneous	heterogeneous
	Dynamic structure	Static structure	Dynamic structure	Dynamic structure
access	Accessed with index	Accessed with index	Not accessed with index, custom access	Accessed with key
duplicates	Duplicates allowed	Duplicates allowed	Duplicates not allowed (unique values)	Duplicates keys not allowed (unique keys); Duplicates values allowed
use	Used max by user	Used mostly by python itself internally	Used to filter	Used for mapping
	Many built in methods dynamic			

→ Interview question: structure closest in Java as compared to list from python ? Array List & Vector

→ list has below methods:

a. list.append(x): add an item to end of list
b. list.extend(L): extend the list by appending all the items in the list
c. list.insert(i, x): insert an element at given position
d. list.remove(x): element based, removes first occurrence of an element; throws error if element is not present

e. list.pop([i]): index based; if index not specified, pops last element
f. list.clear(): removes all elements from list, leaves empty list
g. list.index(x): returns index where first occurrence of element ‘x’ is present; throws error if element not present
h. list.count(x): returns count of element ‘x’
i. list.sort(): does not return, instead rearranges elements of list
j. list.reverser(): does not return, instead reverses list itself

→ data structures:

a. Stack
b. Queue
c. Linked list
d. Tree
e. Graph

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