

PW - ASSIGNMENT

DATE – 2nd Feb

Answer – 1: Characteristics of tuple -

* They are indexed
* Tuples are ordered
* These are immutable
* They can contain duplicate items

As mentioned in third point tuples are immutable.

Answer – 2: Two tuple methods in python are -

1. Count () - Returns the number of times a specified value occurs in a tuple

Example –

Tuple1 = (0, 1, 2, 3, 2, 3, 1, 3, 2)  
No\_of\_counts = Tuple1.count(3)  
print('No. of 3 in tuple are: ', No\_of\_counts)

1. index () - Searches the tuple for a specified value and returns the position of where it was found

Example –

Tuple = (0, 1, 2, 3, 2, 3, 1, 3, 2)  
index\_of\_no = Tuple.index(3)  
print('First occurrence of 3 is', index\_of\_no)  
res = Tuple.index(3, 4)  
print('First occurrence of 3 after 4th index is:', res)

Lists are mutable and tuples are not mutable. List have many in-built methods because it uses them to modify itself but a tuple cannot be modified so it only has two in-built methods.

Answer – 3:

A datatype named “set” does not uses duplicate items.

list1 = [1,1,1,2,1,3,1,4,2,1,2,2,2,3,2,4,3,1,3,2,3,3,3,4,4,1,4,2,4,3,4,4]  
Removed\_Duplicate = set(list1)  
print(f"Updated list after removing duplicates is : {Removed\_Duplicate}")

Output –

Updated list after removing duplicates is : {1, 2, 3, 4}

Answer – 4:

update () adds all missing elements to the set on which it is called whereas set. union () creates a new set. Consequently, the return value of set. update () is None (with side effects) and the return value of set.

s = {1, 2, 3}  
s.update({1, 2})  
print(s)

s = {1, 2}  
a = s.union({1, 2, 3})  
print(a)

Answer – 5:

Dictionaries are Python’s implementation of a data structure that is more generally known as an associative array. A dictionary consists of a collection of key-value pairs. Each key-value pair maps the key to its associated value.

You can define a dictionary by enclosing a comma-separated list of key-value pairs in curly braces ({}). A colon (:) separates each key from its associated value

d = {"name" : "pranjal", "course" : "btech", "semester" : "5th"}  
print(d)

Dictionaries in python are ordered.

Answer – 6:

Yes, we can create nested dictionary in python.

dict1 = {"college" : {"name" : "IIT", "place" : "Delhi", "courses" : 30}}  
print(dict1)

Answer – 7:

dict1 = {"language" : "Python", "Course" : "Data Science Masters"}  
topics = dict1.setdefault("topics", ["Python", "Machine learning", "deep learning"])  
print(dict1)

Answer – 8:

Three view objects in python are – keys, values and items.

dict1 = {"Sport" : "Cricket", "Teams" : ["India", 'South Africa', 'Australia', 'England', 'Sri Lanka', 'new Zealand']}  
print(dict1.keys())  
print(dict1.values())  
print(dict1.items())

Output –

dict\_keys(['Sport', 'Teams'])

dict\_values(['Cricket', ['India', 'South Africa', 'Australia', 'England', 'Sri Lanka', 'new Zealand']])

dict\_items([('Sport', 'Cricket'), ('Teams', ['India', 'South Africa', 'Australia', 'England', 'Sri Lanka', 'new Zealand'])])