ASSIGNMENT – DAY 2

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Q1)List and its default functions.
Ans: The list is the most versatile data-type available in Python, which can be written as a list of comma-separated values (items) between square brackets. Important thing about a list is that the items in a list need not be of the same type. A list is a container which can hold different data types in it.
Default functions:

- len() - Returns the number of items in the list.
- list() - Returns a mutable sequence list of elements.
- max(iterable, *[, key, default]) - Returns the largest item in an iterable (eg, list) or the largest of two or more arguments.
- min(iterable, *[, key, default]) - Returns the smallest item in an iterable (eg, list) or the smallest of two or more arguments.
- range(stop) - Represents an immutable sequence of numbers and is commonly used for looping a specific number of times in for loops.

Q2)Dictionary and its default functions.
Ans: A dictionary is an associative array (also known as hashes). Any key of the dictionary is associated (or mapped) to a value. The values of a dictionary can be any Python data type. So dictionaries are unordered key-value-pairs.
Default functions:

- cmp(dict1, dict2) - Compares elements of both dictionary.
- len(dict) - Gives the total length of the dictionary. This would be equal to the number of items in the dictionary.
- str(dict) - Produces a printable string representation of a dictionary.
- type(variable) - Returns the type of the passed variable. If passed variable is dictionary, then it would return a dictionary type.
- dict.fromkeys() - Create a new dictionary with keys from seq and values set to value.

Q3)Sets and its default functions.
Ans: A Set is an unordered collection data type that is iterable, mutable and has no duplicate elements.
Default functions:

- add() - Adds an element to the set
- clear() - Removes all the elements from the set
- copy() - Returns a copy of the set
- difference() - Returns a set containing the difference between two or more sets
- discard() - Remove the specified item

Q4) Tuple and explore default methods.
Ans: A tuple is a collection which is ordered and unchangeable. In Python tuples are written with round brackets.
Methods:

1. Index method
   The index method returns the first index at which a value occurs.
2. Count method
   The count method returns the number of times a value occurs in a tuple.

Functions:

- cmp(tuple1, tuple2) - Compares elements of both tuples.
- len(tuple) - Gives the total length of the tuple.
- max(tuple) - Returns item from the tuple with max value.
- min(tuple) - Returns item from the tuple with min value.
- tuple(seq) - Converts a list into tuple.

Q5) Strings and explore default methods.

Ans: Strings in Python are arrays of bytes representing unicode characters. However, Python does not have a character data type, a single character is simply a string with a length of 1. Square brackets can be used to access elements of the string.

Methods:

- capitalize() - Converts the first character to upper case.
- casefold() - Converts string into lower case.
- count() - Returns the number of times a specified value occurs in a string.
- encode() - Returns an encoded version of the string.
- endswith() - Returns true if the string ends with the specified value.