**ASSIGNMENT-4**

1. **What exactly is []?**

Ans. Python lists are created by placing elements inside square brackets [].

1. **In a list of values stored in a variable called spam, how would you assign the value 'hello' as the third value? (Assume [2, 4, 6, 8, 10] are in spam.)**

Ans. spam[2]= 'hello'

**Let's pretend the spam includes the list ['a', 'b', 'c', 'd'] for the next three queries.**

1. **What is the value of spam[int(int('3' \* 2) / 11)]?**

Ans. Value will be : **'d'**

1. **What is the value of spam[-1]?**

Ans: 'd'

1. **What is the value of spam[:2]?**

Ans. **['a', 'b']**

**Let's pretend bacon has the list [3.14, 'cat,' 11, 'cat,' True] for the next three questions.**

1. **What is the value of bacon.index('cat')?**

**Ans.** Firstly in above given list the appostophie and commas are placed wrong. It should be

**bacon= [3.14, 'cat', 11, 'cat', 'True']**

Now the value of **bacon.index('cat') will be 1 .**

1. **How does bacon.append(99) change the look of the list value in bacon?**

Ans. After bacon.append(99) , the list will look like this:

**[3.14, 'cat', 11, 'cat', 'True', 99]**

1. **How does bacon.remove('cat') change the look of the list in bacon?**

Ans. Look of the list after **bacon.remove('cat')** will be:

**[3.14, 11, 'cat', 'True', 99]**

1. **What are the list concatenation and list replication operators?**

Ans: The operator for the list concatenation is ‘+’ which concatenate two lists. The operator for the list replication is \* which will replicate the lists.

ex: [1,2] + [3,4] = [1,2,3,4]

[1,2]\*2 = [1,2,1,2]

1. **What is difference between the list methods append() and insert()?**

Ans. append() method can be used for adding element at the end of the list only but using insert() method we can add as well as can modify already occupied positions.

1. **What are the two methods for removing items from a list?**

Ans. The two methods for removing items from a list is remove() and pop(). remove() takes the value to be removed inside () and pop takes index of the value to be removed inside ().

1. **Describe how list values and string values are identical.**

Ans. List values and string values are identical in the sense that both are sequences which are iterable.

1. **What's the difference between tuples and lists?**

Ans. The main difference between lists and tuples is that lists are mutable objects and tuples are immutable that is we can add delete items from a list but the same is not possible with tuples.

1. **How do you type a tuple value that only contains the integer 42?**

Ans. tuple = (42)

1. **How do you get a list value's tuple form? How do you get a tuple value's list form?**

Ans. To get list values in tuple form using tuple() function :

For example if spam is list we can convert it into tuple by writting: tuple(spam)

And similarly tuples can be converted to list by using list() function.

1. **Variables that "contain" list values are not necessarily lists themselves. Instead, what do they contain?**

Values contained inside a list are not necessarily list, they can be integer, tuple, string , dictionary.

1. **How do you distinguish between copy.copy() and copy.deepcopy()?**

**Ans.** copy.copy() creates a new object which stores the refrence of the original elements. Whereas copy.deepcopy() creates a new object and recursively adds the copies of nested objects present in the original elements.