**Assignment -4**

1. What exactly is []?

**Answer:-**

This is a list with no data or empty list.

2. 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.)

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

**Answer:-**

spam[2] = ‘hello’

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

**Answer:-**

‘d’ as ‘3’\*2 = ‘33’, int(int(‘33’)/11) = 3, span[3] = ‘d’

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

**Answer:-**

Span[-1] = ‘d’ as negative index counts from the end.

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

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

**Answer:-**

[‘a’, ‘b’]

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

**Answer:-**

The index of bacon.index(‘cat’) is 1

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

**Answer:-**

[3.14, ‘cat’, 11, ‘cat’, True, 99]

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

**Answer:-**

[3.14, 11, ‘cat’, True]

9. What are the list concatenation and list replication operators?

**Answer:-**

+ is used for list concatenation and \* for list replication.

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

**Answer:-**

append() add the value at the end of the list that is as the last value but insert() add at the specific location in the list.

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

**Answer:-**

The del statement and remove() method are used for removing items from a list.

12. Describe how list values and string values are identical.

**Answer:-**

Both list value and string values are identical as they have index, possible to slices. len() method, concatenate, replicate all work for both string as well as list.

13. What's the difference between tuples and lists?

**Answer:-**

|  |  |
| --- | --- |
| **List** | **Tuple** |
| [] is used in case of list. | () is used in case of Tuple |
| List are mutable | Tuple are immutable |

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

**Answer:-**

(42,) as the comma is mandatory.

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

**Answer:-**

tuple() and list()

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

**Answer:-**

A list can contain any data type.

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

**Answer:-**

Copy.copy() function will do the shallow copy of the function where as copy.deepcopy() duplicate any list inside the list.