1. What exactly is []?

Sol: List

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.)

Sol: spam = [2,4,6,8,10]

spam[2]= ‘hello’

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

Sol: ‘d’

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

Sol: ‘d’

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

Sol: [‘a’, ‘b’]

1. What is the value of bacon.index(‘cat’)?

Sol: 1

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

Sol: [3.14, ‘cat’, ‘11’, ‘cat’, True, 99]

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

Sol: [3.14, ‘11’, ‘cat’, True]

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

Sol: Concatenation = +

Replication = \*

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

Sol: Append: It adds the required value at the end of the list.

Insert: It adds the required value at the desired position.

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

Sol: There are 3 methods for removing items from a list.

Remove: It removes the specified item from a list; input is provided to identify item.

Pop: It removes item from a list at the specified index; input is provided to specify index.

Delete: It removes item at the specified index; it is also capable of deleting multiple items.

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

Sol: The only similarity between list values and string values is that both are written in a sequential format, i.e., items of the string and list both can be accessed through index.

1. What’s the difference between tuples and lists?

Sol:

|  |  |
| --- | --- |
| Tuple | List |
| Tuple stores items using (). | List uses [] to store items. |
| Tuples are immutable. | Lists are mutable |

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

Sol: (42,)

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

Sol: To convert list into Tuple: tuple()

To convert tuple into List: list()

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

Sol: Variables that contain list values, contain references to the list and not the actual list.

This is because values like list and dictionaries are mutable and hence are stored as reference.

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

Sol: copy.copy() : copy.copy also called as shallow copy creates a new object that has the reference of the copied object. Any change in the original object is reflected in the duplicate object.

copy.deepcopy(): Deepcopy creates a new object and by recursion adds the copies of nested objects present in the original element. Any change in the original element is not reflected in the duplicate or copied element.