1. What exactly is []?

**Answer:** It is an 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.)

**Answer:**spam=[2,4,6,8,10]  
spam[2]="hello"  
print(spam)

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

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

**Answer:** spam[3]=’d’

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

**Answer:** ‘d’

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

**Answer:** [ 'a', 'b']

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

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

**Answer:** 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:** List concatenation operator: **+** and replication operator: **\***

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

**Answer:**

The method append() adds the value/element at the end of the list .

But insert() adds the value/element wherever in the list by specifying the index of the value.

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

**Answer:**pop()remove()del()

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

**Answers:**

Both lists and strings can be passed to len(), have indexes and slices, be used in for loops, be concatenated or replicated, and be used with the in and not in operators.

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

**Answers:**

|  |  |
| --- | --- |
| **List** | **Tuple** |
| List is mutable. | Tuple is immutable. |
| List is denoted by square brackets [] | Tuple is denoted by parenthesis ( ) |

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

**Answer:** (42,)

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() functions respectively.

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

Answer: They contain references to list values.

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

**Answer:**

|  |  |
| --- | --- |
| copy.copy() | copy.deepcopy() |
| A shallow copy constructs a new compound object and then (to the extent possible) inserts references into it to the objects found in the original.  **or**  copy() create reference to the original object. If you change copied object - you change the original object. | A deep copy constructs a new compound object and then, recursively, inserts copies into it of the objects found in the original.  **or**  deepcopy() creates new object and does real copying of the original object to the new one |
|  |  |