1. What exactly is []?

**Answer:** list

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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] = ‘hello’

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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:** ‘d’

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

**Answer:** ‘d’

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

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

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

**Error in input: bacon = [3.14, 'cat,' 11, 'cat,' True]**

**Corrected input: bacon = [3.14, 'cat', 11, 'cat', True]**

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, 99]

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

**Answer:**

concatenation -> **+**

replication -> **\***

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

**Answer:**

**append() ->** is used to add an element in end of the list.

i**nsert() ->** is used to insert element in specific index.

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

**Answer:**

del bacon[-1]

bacon.remove(99)

bacon.pop()

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

**Answer:**

-> Strings are immutable sequences of Unicode code points.

-> Lists are mutable sequences, typically used to store collections of homogeneous items.

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

**Answer:**

tuple -> Immutable (can not be changed)

list -> Mutable (can be modified)

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

**Answer:** a = tuple(42) or a = (42)

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

**Answer:**

Use type casting for it.

**Example:**

tuple([1,2,3,4]) **# list to tuple**

list((1,2,3,4)) **# tuple to list**

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

**Answer:**

Variable contains the reference of the list. It may contain heterogeneous element like string, integer, float etc,.

**Example:**

a = [‘a’, 1, 2.3]

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

**Answer:**

copy.copy() method creates a copy of an existing list. The copy() method is added to the end of a list object and so it does not accept any parameters.

copy.deepcopy() is a process in which the copying process occurs recursively. It means that any changes made to a copy of object do not reflect in the original object.

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