

1. What exactly is []?

Answer: [] is an empty list containing no values.

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'

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[int(int('3' * 2) / 11)] = 8

Explanation: int('3'*2) = 33, 33/11 = 3, spam[3] = 8 at position 4

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

Answer: 'd'

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

Answer: spam[:2] → [2, 4]

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: Index of cat is 1

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

Answer: bacon.append(99) adds 99 to the last index of the list.

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

Answer: Removes the last value named 'cat' from the list and the size of the list reduces by one.

To remove all values by the name 'cat' we have to use a for a loop.

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

Answer: For concatenation we can use the + operator and replication can be done using * operator

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

Answer: `append` adds an element to the end of the list, and `insert` adds an element to a specified position in a list.

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

Answer: `remove()` and `del()` are the two methods.

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

Answer: Both list and string are mutable objects, which can be used in for loop with- in and not in operator, `len()` method can be also used to find the length of both, etc

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

Answer: Tuples are immutable and lists are mutable. Tuples are written in normal brackets `()` and lists are stored in square brackets `[]`

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: To get a list value's tuple form → `tuple()` method

To get a tuple value's list form → `list()` method

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

Answer: They are pointers or reference to those list values

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

Answer: `copy.copy()` creates a new object and stores references to the values in the original list.

`copy.deepcopy()` creates a new object and copies all values in the original list to the new list.