1. What exactly is []?

Ans: 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.)

Ans:

spam = [2, 4, 6, 8, 10]  
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)]?

Ans: ‘d’

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

Ans: ‘d’

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

Ans: ['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')?

Ans: 1

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

Ans: [3.14, 'cat,' 11, 'cat,' True, 99]

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

Ans: [3.14, 11, 'cat,' True]

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

* + (list concatenation)
* \* (list replication)

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

Ans: Append inserts element at the end. Insert add element at any desired location of list.

Example:

my\_list = [1, 2, 3]  
my\_list.append(4)  
print(my\_list) # Output: [1, 2, 3, 4]  
  
my\_list.insert(1,'inserted')  
print(my\_list) # Output: [1, 'inserted', 2, 3, 4]

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

* remove()
* pop()

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

* Elements can be accessed by index value in both
* Both are ordered collection
* len() function can be used in both
* slicing is possible in both
* iteration is possible in both
* concatenation is possible in both
* replication is possible in both

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

|  |  |
| --- | --- |
| List | Tuple |
| Mutable | Immutable |
| [1,2,3] | (1,2,3) |
| More built-in functions | Less built-in function |
| Used when collection may frequently change | Used when collection should never change |

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

a=(42)

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

* tuple(list\_name)
* list(tuple\_name)

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

Variable hold memory addresses of the list in computer memory.

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

|  |  |
| --- | --- |
| Shallow copy | Deep copy |
| copy.copy() | copy.deepcopy() |
| Changes made to nested objects within the copied object will affect both the original and copied objects because they share the same references | Changes made to the original object or its nested objects will not affect the copied object, and vice versa, as they are separate entities with their own memory locations |