1. What exactly is []?

[ ] is a empty list, like a =[ ]

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.)

# solution by changing the value in index 3

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

spam[2] = 'hello'

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)]?

'd'

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

'd'

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

['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')?

1

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

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

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

[3.14, 11, 'cat', True]

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

( \* ) is list replication operator

l1 = [7,4]

l1\*3

( + ) is list concatination operator

l1 = [1,4]

l2 = [2,5]

l1+l2

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

append() Appends object to the end of the list

insert() Insert object before index

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

#remove(item) - removeds first occurence of a item

bacon = [3.14, 'cat', 11, 'cat', True]

bacon.remove('cat')

bacon

#pop(pos) - Remove and returns item at index (default -1).

bacon = [3.14, 'cat', 11, 'cat', True]

bacon.pop() #-1 default

bacon

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

Both lists and strings can be passed to len()

Have indexes and slices

Can be used in for loops

Can be concatenated or replicated

Can be used with the in and not in operators

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

Lists : are mutable ,Indexable and Slicable- they can have values added, removed, or changed. lists use the square brackets, [ and ]

Tuples : are immutable ,Indexable and Slicable; they cannot be changed at all. Tuples are written using parentheses, ( and )

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

tup2=(42,) #The trailing comma is mandatory.

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

The tuple() :

l1 = [2,3]

l = tuple(l1)

l

and list() :

t1 = (3,4)

t = list(t1)

t

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

They contain references to list values

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

The copy.copy() function will do a shallow copy of a list,

The copy.deepcopy() function will do a deep copy of a list. only copy.deepcopy() will duplicate any lists inside the list