1. What exactly is []?

ANS : [] is a list collection mutable of value

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1. 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: x[2]="hello"

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

1. 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 : c , d

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 : index = 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, 99]

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

ANS : concatenation of list is an operation where the element of one list are added at the end of the another list and \* operator repeats the items in a list a given number of time

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

ANS : the difference is that with append you just add a new entry at the end of the list and with insert you can create a new entry in the position you want

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

ANS : pop() , remove() , clear()

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

ANS : which are ordered collection of characters , except that the element of a list can have any type and for any one list , the items can be of different type

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

ANS : one of the most important differences between list and tuple is that list is mutable , whereas a tuple is immutable . this mean list can change and tuple cannot be change . Same operation can work on list but not on tuples

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

ANS : (42,)

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

ANS : list() this is used to convert a given tuples into a list . list comprehension along with zip()function is used to convert the tuples to list and create the list of tuples.

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

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

ANS : A deep copy create a new object and recursively adds the copies of nested objects present in the original elements .and copy construct a new compound object and then inserts references into it to the object found in the original