1.What exactly is []?

A)This is an 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.)

A)

spam.insert(2,’hello’) #spam.insert(index,value)

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)]?

A) It refers to the 4th value that is index 3 of the list spam. So spam[3] would result in ‘d’

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

A) It refers to the last member of the list that is ‘d’.

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

A) It slices the list and yields the first two values of the list spam that index 0 and index 1.

The output is [‘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')?

A) 1 .It returns the index of the first match of the argument provided.

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

A) It simply appends 99 to the end of the list. The resulting list would like

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

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

A) It basically removes the first match of cat at index 1. The resulting list after the execution of remove command would be:

[3.14, 11, 'cat,' True]

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

A) The ‘+’ operator acts as the concatenation operator and the ‘\*’ multiplication acts the replication operator.

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

A) the append method always add the value at the end of the list that is ‘-1’ position, whereas, the insert method gives the flexibility to choose the index position at which the user desires to add/insert a quantity.

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

A) pop and del methods can be used to delete an entry from the list. However, pop removes the last element and the del method removes the element that is provided as the index number.

For example del bacon[1] , would remove the 2nd element.

List.remove() method is also there. It removes the element, specified as the argument to the remove method.

List.remove(‘cat’) , this would remove the element ‘cat’ from the list.

List.clear() method. It clears the entire list.

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

A) Both uses indexing and slicing.

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

A) Tuples are immutable whereas lists are mutable.

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

A) A=(42,)

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

A) By using the list and tuple method. The command list(tuple) would result in a list having the tuples’ values and vice versa tuple(list) would result in a tuple having the same entries as those of the list.

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

A) Slicing a list would result in a list again. When just assigning a single value from a list to a variable, then the type of that variable depends on that data which is assigned to that variable from a list.

If the question refers to the pointers, then the name of the list acts as a pointer type and then slicing or indexing the pointer may yield the elements of the list.

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

A) The shallow copy carries the references of the elements in the original list(for example). Therefore, when making a change in the original list, this would result in the change in the new copied list as well, however, we haven’t touched the new copied list. This happens because we have passed the reference to the child elements rather than making copies of them at different memory locations. That’s why, every time the original list is changed, it would be reflected in the copied list as well.

On the contrary, a deep copy is entirely independent of the original list. As it doesn’t hold the reference to the elements in the original list, rather it contains copies of the elements designed at different locations, hence the word completely independent.

Now, a change in the original list won’t be reflected in the copied one.

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