1. What exactly is [ ]?

Empty list. List is one of the 4 data types in python used to store collections of data

2. In a list of values stored in a variable called spam, how would you assign the value &#39;hello&#39; as the

third value? (Assume [2, 4, 6, 8, 10] are in spam.)

spam.insert(2,”hello”)

Let&#39;s pretend the spam includes the list [&#39;a&#39;, &#39;b&#39;, &#39;c&#39;, &#39;d&#39;] for the next three queries.

3. What is the value of spam[int(int(&#39;3&#39; \* 2) / 11)]?

3

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

d

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

c

Let&#39;s pretend bacon has the list [3.14, &#39;cat,&#39; 11, &#39;cat,&#39; True] for the next three questions.

6. What is the value of bacon.index(&#39;cat&#39;)?

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(&#39;cat&#39;) change the look of the list in bacon?

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

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

Concatenation operator is +

Replication operator is \*

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

Append method : appends the object to the end of list

Insert method : insert the object just before the index

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

Clear() : Remove all the objects

pop(): Remove the object by the index and return the object

remove() : Remove the item by value

del : Remove the item by the index or slice

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

Both are the ordered collection of characters/values

Slicing can be performed on list as well as string values

13. What&#39;s the difference between tuples and lists?

| LIST | TUPLE |
| --- | --- |
| Mutable | Immutable |
| Iteration time consuming | Iteration comparatively faster |
| Operations: performance better | Appropriate for accessing elements |
| Consumes more memory | Consumes less memory |

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

(42,)

15. How do you get a list value&#39;s tuple form? How do you get a tuple value&#39;s list form?

List to tuple using list( tuple ( , ) ) like list( ( ,) )

Tuple to list using tuple(list()) or tuple( [ ])

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

References to list values

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

.copy creates reference to the original object (first-level data to the original object). If change in copied object will also change the original object

.deepcopy() creates a new object and of the original. Change on the deep copied object will not affect the original object, copies original object recursively