

1. What exactly is []?

Ans: [] is used to define a list like [4,65,47,56,4,65,66].

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: We can write a code as 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: Negative indexing starts from last element to answer would be '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: bacon = [3.14, 'cat', 11, 'cat', True, 99]

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

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

It removes the first instance of the value 'cat'

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

Ans: List concatenation operator: +. Eg [4,454,546] + [45,4,4,53]

List replication operators: *. Eg [4,454,546] * [45,4,4,53]

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

Ans: append() adds an element to the end of the list, while insert() allows you to insert an element at a specific position within the list.

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

Ans: The two methods commonly used for removing items from a list in Python are `remove()` and `pop()`.

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

Ans: Both list value and string values have indexes by which we can access each element in the string or list.

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

Ans: Elements in the list can be modified once defined but in tuples we can't modify the values.

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: A) It can be done by following method:

```
a = [654,54,65,6,564,6]
```

```
b = tuple(a)
```

B) It can be done by following method:

```
a = (654,54,65,6,564,6)
```

```
b = list(a)
```

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

Ans: When a list is assigned to a variable, the variable holds a reference to the memory location where the list values is stored.

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

Ans: The `copy.copy()` function creates a shallow copy of an object. It duplicates the top-level object, including its references.

The `copy.deepcopy()` function creates a deep copy of an object. It copies all objects, including nested objects, to create independent copies.