1. What exactly is []?

Answer: [] refers to empty list in python. If you write the code (student\_name = []) it create empty list with the name student\_name.

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.)

Answer:

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

spam[2] = ‘hello’

print(spam)

output : [2, 4, ‘hello’, 8, 10]

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)]?

Answer:

Step 1: ‘3’ \* 2 = ‘33’

Step 2: int(‘33’) = 33

Step 3: 33 / 11 = 3

Step 4: int(3) = 3

Step 5 spam[3] = ‘d’

The answer is ‘d’.

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

Answer: ‘d’

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

Answer: ‘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')?

Answer: the value of bacon.index('cat') is 1.

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

Answer: bacon = [3.14, 'cat,' 11, 'cat,' True, 99]

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

Answer: bacon = [3.14, 11, 'cat,' True, 99]

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

Answer: the list concatenation operator are ‘+’. The list replication operator are ‘\*’.

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

Answer: the append() will add the item at the end of the list. insert() will add the item at the specified index inside the list.

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

Answer: two methods for removing items from a list is pop() and remove() .

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

Answer: both list and string can be index, sliced , iterated and both can be concatenated and replicated using “+” and “-“ operators.

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

Answer: List are mutable and tuples are immutable.

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

Answer: my\_tuple = (42)

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

Answer:

my\_list = [1]

my\_tuple = ()

List value’s tuple form: tuple(my\_list)

Tuple value’s list form: list(my\_tuple)

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

Answer: Variables that "contain" list values actually contain references to the list objects in memory.

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

Answer:

copy.copy() – creates a shallow copy which copy only the object , not its nested object. It also affect the original object if the copied object value is changed.

copy.deepcopy() – creates a deep copy which copy the object along with the nested object. It will not affect the original object if the copied object value changes.