**1. What exactly is []?**

* it returns series
* used pass a single column to retrieve from a dataframe

**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.)**

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

spam[2] = 'hello'

**3. What is the value of spam[int(int('3' \* 2) / 11)]?**

'd'

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

'd'

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

**Let's pretend bacon has the list [3.14, 'cat,' 11, 'cat,' True] for the next three questions.**

['a', 'b']

**6. What is the value of bacon.index('cat')?**

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('cat') change the look of the list in bacon?**

[3.14, 11, 'cat', True]

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

list concatenation is +

list replication is \*

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

**Append()** = add values only to the end of a list

**insert()** = add them anywhere in the list.

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

* Remove()
* pop()

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

List and string both are used to store value /data and both are sequence.

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

|  |  |
| --- | --- |
| **lists** | **tuples** |
| Lists are mutable | Tuples are immutable |
| Lists consume more memory | Tuple consume less memory as compared to the list |
| Lists have several built-in methods | Tuple does not have many built-in methods. |

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

(42,)

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

List comprehension with zip() function

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

contain references to list values

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

The copy.copy() function will do a shallow copy of a list,

The copy.deepcopy() function will do a deep copy of a list.

only copy.deepcopy() will duplicate any lists inside the list.