1. What exactly is []?

# [] is one of the datatype of python known as list. [] is list containing zero elements means empty list

1. 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.)

# spam[2] = 'hello' .

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

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

# The value of the above expression is d

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

# The value of above expression is d

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

# The value of above expression is [a,b]

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

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

# The value is 1

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

# [3.14, 'cat,' 11, 'cat,' True, 99] will be the update list

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

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

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

# + is used for list concatenation and \* is used for list replication operation

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

# Append() adds the element at the end of the list while insert() is use to insert element in between the list as per the index assigned to it.

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

# List.remove and list.pop is used to remove items from any given list

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

The values that make up a list are called its elements. Lists are similar to strings, which are ordered collections of characters, except that the elements of a list can have any type and for any one list, the items can be of different types.

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

# The tuples are denoted as () while list are denoted as []. List are the collection of datatypes which are mutable while tuples are the collection of datatypes which are immutable.

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

# (42,) is the tuple .

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

# [(tuple1),(tuple2),(tuple3),..,(tuple n)] is the tuple’s value list form and ([list1],[list2],[list3],……,[list n]) is the list’s value tuple form

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

# Variables contains references to list values rather than list values themselves. But for strings and integer values, variables simply contain the string or integer value.

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

# copy() create reference to original object. If you change copied object - you change the original object. . deepcopy() creates new object and does real copying of original object to new one. Changing new deepcopied object doesn't affect original object.