ASSIGNMENT 4

1. What exactly is []?

It is a list which is empty.

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.)

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)]?

The answer would be ‘d’.

‘3’*2 would be ‘33’. Int(‘33’) would be 33 with int datatype. 33/11 would be 3 and int(3) would be 3 with int datatype. Spam(3) would be ‘d’.

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

The answer would be again ‘d’. It’s a negative index which would be counted from end of the list.

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

It would be a list containing [‘a’,’b’]. Here, the ending index is 2 and the starting index is not mentioned. So the values with index 0 and 1 are retrieved and the value corresponding to the index 2 is not included.

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')?

The index of cat would be 1

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

bacon = [3.14,’cat’,11,’cat’,True,99]

append would add a new value to the end of the list.

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

Bacon = [3.14,11,’cat’,True]

The first occurrence of the value is removed from the list.

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

We use + operator to concatenate two lists and we use * operator to replicate two lists. It would work same on strings as well.

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

Append would add a value to the end of the list whereas insert can add the values at any location in the list.

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

Del and remove() both are used to remove values from the list

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

Both the lists and strings can be concatenated and replicated. They can be passed in for loops. Both can be checked using ‘in’ and ‘not in’ operators. They have indexes and we can find the length using the len() function.

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

Tuples are immutable which means we cannot add values to a tuple. Lists are mutable which means we can add, remove, and update a value in list. Tuples are used written using parenthesis () and lists are written using square brackets []

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

(42,) The ending , is must. If ending , is not mentioned then it would be considered as integer datatype.

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

By using the tuple() and list() functions.

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

They contain the references to the list values.

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

Copy.copy() will do a shallow copy of the list. Copy.deepcopy() will do a deep copy of the list and it will duplicate the list which is inside another list.