ASSIGNMENT 4

1. What exactly is []?

Ans . Square bracket[] is an empty list value that contains no items in it.

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.)

Ans. spam[2] = ‘hello’

Because third value in list is at index 2.

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

Lets pretend the spam includes the list [‘a’,’b’,’c’,’d’] for the next three queries.

Ans. ‘3’ is a string and 2 is an integer so multiplication results in joining string with itself as str(‘33’) is just 33 as integer. Operator / is division operator, 33/11 is 3.0 (a float value) it convert into int so it became int(3).

spam = [‘a’,’b’,’c’,’d’]

spam[int(int(‘3’ \* 2)/11)]

spam[3]

output is ‘d’ because it is at index 3

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

Ans. ‘d’ because negative index starts from the end.

1. 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.

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

Ans. bacon=[3.14,’cat’,11,’cat’, True]

Bacon.index(‘cat’)

1 ( cat is at index 1) is output

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

Ans. bacon.append(99)

[3.14,’cat’,11,’cat’, True,99] is output

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

Ans. bacon.remove(‘cat’)

[3.14,11,’cat’, True]

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

Ans. The operator for list concatenation is + and for list replication is \*.

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

Ans. list method append() will add values only to the end of list and insert() can add values anywhere in the list.

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

Ans. The remove() and del statement are two methods for removing items from a list.

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

Ans. Both list and string have indexes, used in for loops , concatenated or replicated , used with in and not in operators and both are passed to len() also.

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

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| --- | --- |
| Lists are mutable. | Tuples are immutable. |
| In list we can remove values or changed it. | In tuples values cannot be changed. |
| Lists values are written in square brackets[]. | Tuples are written in parentheses(). |
| In list we can add values. | In tuples we cannot add values in it. |

Ans. LISTS TUPLES

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

Ans. With parentheses, for example, spam= (42, 11,’hello’)

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

Ans. To convert list values to tuple, We can use tuple() built in function to pass the list as an argument and it return tuple datatype as an output. To convert tuple values into list , we can use list() built in function to pass tuple as an argument and returns new list objects as an output.

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

Ans. They contain references to list values.

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

Ans. copy.copy() returns a shallow copy of the list. It makes duplicate copies.

copy.deepcopy() returns a deep copy of the list. Only copy.deeepcopy() will duplicate any lists inside the list otherwise both are same. copy() function make a duplicate copy of a list by giving it different reference id.