# 1. What exactly is []?

"""It is an empty list"""

# 2. In a list of values stored in a variable called spam, how would you assign the value &#39;hello&#39; as the

# third value? (Assume [2, 4, 6, 8, 10] are in spam.)

import copy

"""

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

spam[2] = "Hello"

"""

#3. spam = ['a','b','c','d']

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

"""Sol: d"""

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

"""Sol: d"""

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

"""Sol : ab"""

# bacon = [3.14, cat, 11, cat, True]

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

"""

Sol: 1

"""

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

"""

bacon = [3.14, cat, 11, cat, True, 99]

"""

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

"""

bacon = [3.14, 11, True,cat, 99]

"""

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

"""

List concatenation : "+" operator

List replication : "\*" operator

"""

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

"""

insert(): This function inserts the values at the particular location

l.insert(0,2) = Inserts 2 at 0th index

append(): This function adds the value at the end of the list

l,append(2) = Appends at the end of the list

"""

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

"""

l.remove()

l.pop()

"""

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

"""

Solution:

li = [1,2,3,4]

s = "1234"

print(s[0],li[0])

In the above example, the list values and string values can be extracted

from the same indices.

They have the same values

"""

#13. What is the difference between tuples and lists?

"""Lists are mutable and tuples are immutable."""

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

"""

Solution:

t1 = (1,23,42,34,7)

"""

#15. How do you get a list values tuple form? How do you get a tuple values list form?

"""

l = [1,2,3,4]

t1 = tuple(l)

l1 = list(t1)

"""

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

"""

t = (1,2,[4,5,6],7,8)

They can be tuples

"""

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

"""

l = [1,2,3]

d = l.copy()

d1 = l.deepcopy()

print(d)

l.append(4)

print(d)

print(id(l),id(d), id(d1))

In shallow copy, any changes in the value of d will make changes in the value of l

In deepcopy, any changes in the value of d will not change the original list that is l

"""

import copy

l = [1,2,3]

d = l.copy()

d1 = l.deepcopy()

print(d)

l.append(4)

print(d)

print(id(l),id(d), id(d1))