Assignment-4

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1. What exactly is []?

Ans : The indexing operator (Python uses square brackets to enclose the index) selects a single character from a string. The characters are accessed by their position or index value.

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.)

Ans: We can assign the value hello as third value by using **append operator.**

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)]?

Ans: ‘d’

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

Ans: ‘d’

5. 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.

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

Ans: 1

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

Ans: ['3.14', 'cat,11', 'cat', True, 99]

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

Ans: ['3.14', '11', 'cat', True, 99]

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

Ans: The operator for list concatenation is +, while the operator for replication is \*.

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

Ans: The difference between the two methods is that . append() adds an item to the end of a list, whereas . insert() inserts and item in a specified position in the list.

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

Ans: In Python, use list methods clear() , pop() , and remove() to remove items (elements) from a list. It is also possible to delete items using del statement by specifying a position or range with an index or slice.

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

Ans: 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. There are several ways to create a new list.

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

Ans : The primary difference between tuples and lists is that tuples are immutable as opposed to lists which are mutable. Therefore, it is possible to change a list but not a tuple. The contents of a tuple cannot change once they have been created in Python due to the immutability of tuples.

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

Ans: **(42,)** (The trailing comma is mandatory.)

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

Ans: Usingthe tuple() built-in function  
An iterable can be passed as an input to the tuple () function, which will convert it to a tuple object. If you want to convert a Python list to a tuple, you can use the tuple() function to pass the full list as an argument, and it will return the tuple data type as an output.

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

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

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

Ans: 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.