1. **What exactly is []?**

This is used for declaration of List in the python. list is created by placing items (elements) inside square brackets [], separated by commas.

Ex. A=[1,2,3]

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.)**

A screenshot of a computer

Description automatically generated

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)]?**

Ans -> ‘d’

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

'd'

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 -> 1

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

[3.14, 'cat', 11, 'cat’, True , 99]

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

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

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

As with strings, we can use the operators + and \* to concatenate and replicate lists.

* When + appears between two lists, the expression will be evaluated as a new list that contains the elements from both lists. The elements in the list on the left of + will appear first, and the elements on the right will appear last.
* When \* appears between a list and an integer, the expression will be evaluated as a new list that consists of several copies of the original list concatenated together. The number of copies is set by the integer.

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

append() adds an item to the end of a list, whereas insert() inserts and item in a specified position in the list

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

The methods are remove(), pop() and clear(). It helps to remove the very first given element matching from the list. The pop() method removes an element from the list based on the index given. The clear() method will remove all the elements present in the list.

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

Both are in sequential mode of reprentation.

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

The list is dynamic, whereas the tuple has static characteristics. This means that lists can be modified whereas tuples cannot be modified, the tuple is faster than the list because of static in nature. Lists are denoted by the square brackets but tuples are denoted as parenthesis.

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

T1=(42)

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

Ans -> If we having list spam=[‘a’, ‘b’] and it converted to tuple by tuple(spam) and Vice versa.

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

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()?**

The copy() returns a shallow copy of the list, and deepcopy() returns a deep copy of the list. As you can see that both have the same value but have different IDs.