

Assignment 4:-

1. What exactly is []?

:- These is called empty list i.e. a list without any elements.

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

spam.insert(2,'hello')

Updated list:- [2,4,'hello',6,8,10]

Lets 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)]?

:- 'd'

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

:- 'd'

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

:- ['a','b']

Lets 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')?

:- 1

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

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

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

:- updated list - [3.14,11,'cat',True,99]

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

:- LIST CONCATENATION- it is done by simply using '+' operator.

LIST REPLICATION- it is done by using (*) operator.

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

:- Append :- It basically add the element to the end of the list.

Insert:- It insert any element on any desired index of the list.

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

:- There are two method for removing elements from the list-

1. Remove - It basically removes the particular value which you are providing as a argument.
2. Pop - It basically removes the last values by default.

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

:- List values and string values are identical because of following points-

1. They both follows index rule.
2. Both having lengths.
3. Both are iterable.

13. What is the difference between tuples and lists?

- :-
1. List is mutable while tuple is immutable.
 2. List is dynamic while tuple is static.
 3. List is written as square brackets [] while tuples into round braces ().
 4. You can iterate faster in tuple as compared to list.
 5. List having lots of inbuilt methods while tuple do not.
 6. List is time consuming while tuples are not.

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

:- `t = (42,)`

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

: - `copy.copy()` is also called shallow copy - it is basically copy of the list into another list. As you make the changes in shallow copy it will also showcase into original list.

While `copy.deepcopy()` is the copy of the original list into list but any changes into deepcopy list doesn't affect original list.