

Difference between list and tuples

List can be edited (adding, removing, modifying of elements) but tuples cannot be modified.

Key features of Python

- Easy to learn
- Object oriented
- Independent of Operating System (Can be run in any OS)
- Can be integrated with other languages like java, c, c++ etc.
- Free and open source

Deep and shallow copy difference

- A shallow copy constructs a new compound object and then (to the extent possible) inserts references into it to the objects found in the original.
- A deep copy constructs a new compound object and then, recursively, inserts copies into it of the objects found in the original.

How ternary operators can be used

To run any statement when a condition is true and run another statement when the condition is false

Memory management in Python

Memory of variables are automatically allocated by python itself

Usage of help() and dir() function in python

Help(): Gives the description of the function

Dir(): lists all the functions of module

Whenever Python exits, why isn't all the memory de-allocated?

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What are negative indexes and why are they used?

Negative index is used in python to index starting from the last element of the list, tuple or any other container class which supports indexing. -1 refers to the last index, -2 refers to the second last index and so on.

For lists :

```
>>> array = [0,1,2,3,4,5]
```

```
>>> array[-1]
```

For strings :

```
>>> string = "Hello!"
```

```
>>> string[-1]
```

```
 '!
```

This is useful when you don't have the length of the container, and want to reference a position relative to the last index without having to calculate the length.

What is the difference between range & xrange?

Which one of these is floor division?

Section – 2:

1. 12

22

30

36

40

2. i= 55

sum= 125

3. [6, 8, 4, 5]

4. 6 times with result

100

120

140

160

180

200

5. [300, 400]

[200, 300, 400, 500]

[200, 300, 400, 500, 300, 400]

6. Prints individual character of the string. It gives output as ['S', 't', 'r', 'i', 'n', 'g']