**1) What is List? How will you reverse a list?**

A Python list is an ordered and changeable collection of data objects. Unlike an array, which can contain objects of a single type, a list can contain a mixture of objects. List is a collection datat type. List is represented by [ ](square brackets). List is mutable, orderable, indexable, sequence collection type. Mutable = we can change item of list.

Reverse Array using the reversed() and reverse() built-in function. Using reversed() we can reverse the list and a list\_reverseiterator object is created, from which we can create a list using list() type casting. Or, we can also use the list reverse() function to reverse list in place.

**2) How will you remove last object from a list?**

**Suppose list1 is [2, 33, 222, 14, and 25], what is list1 [-1]?**

Lists are one of the mutable data types in python.These are ordered collection of different data types. For example,

my\_list=[1, “one" ,1.4]

As lists are ordered collection of different data types, we can traverse through different elements in a list through the process of indexing. There are two types of indexing i. e positive indexing and negative indexing.Positive indexing starts from the first element of the list itself (i. e from extreme left corner) while negative indexing starts in reverse order i. e from the last element of the list. Here,

list1=[2,33 222,14,25]

Thus here,

list1[-1]=25

list1[-2]=14

list1[2]=222

**3) Differentiate between append () and extend () methods?**

1)append() : using append method we can add data at the end of the list

syntax:

list.append(element)

2)extend() : using extend method we can add multiple elements in existing list

syntax:

list.extend([element])

**5) how will you compare two lists? in python**

The list. sort() method sorts the two lists and the == operator compares the two lists item by item which means they have equal data items at equal positions. This checks if the list contains equal data item values but it does not take into account the order of elements in the list.

**18) What is tuple? Difference between list and tuple.**

Tuples are used to store multiple items in a single variable.

Tuple is one of 4 built-in data types in Python used to store collections of data, the other 3 are List, Set, and Dictionary, all with different qualities and usage.

A tuple is a collection which is ordered and unchangeable.

Tuples are written with round brackets.

**43) Why Do You Use the Zip () Method in Python?**

The zip() function in Python is used to combine two or more iterable dictionaries into a single iterable, where corresponding elements from the input iterable are paired together as tuples. When using zip() with dictionaries, it pairs the keys and values of the dictionaries based on their position in the dictionary.

**52) How Many Basic Types Of Functions Are Available In Python?**

There are mainly two types of functions in Python.

Built-in library function: These are Standard functions in Python that are available to use.

User-defined function: We can create our own functions based on our requirements.

**53) How can you pick a random item from a list or tuple?**

Create a tuple and add some dummy data to it. Generate a random item from the tuple using random. choice() method(This function returns a random element from the specified sequence i.e tuple here) by passing the input tuple as an argument to the choice()

function.

**54) How can you get a random number in python?**

random.randint() method is used to generate random integers between the given range.

**55) How will you set the starting value in generating random numbers?**

The seed() method is used to initialize the random number generator. The random number generator needs a number to start with (a seed value), to be able to generate a random number. By default the random number generator uses the current system time.

**56) How will you randomizes the items of a list in place?**

Shuffle() is the most recommended method to shuffle a list. Python in its random library provides this inbuilt function which in- place shuffles the list.