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

Ans:- List is a group of different type of data.

Here are the general steps to reverse the list:

* Initialize an empty list to store the reversed elements.
* Iterate through the original list.
* Insert each element at the beginning of the new list.
* The new list now contains the original list's elements in reverse order.

1. **How will you remove last object from a list? Suppose list1 is [2, 33, 222, 14, and 25], what is list1 [-1]?**

Ans:- one way is to use the pop() method. this method removes the last element of a list by default, or you can specify the index of the element you want to remove. List1 [-1] is : 25

1. **Differentiate between append () and extend () methods?**

Ans:- The append() method is used to add an item to the end of a list, whereas the extend() method is used to merge a second list (or other Iterable) onto the end of a list.

* Use of append

products = ["Apples", "Oranges", "Bananas"]

new product = "Apricots"

products.append(new product)

print(products)

output:- ['Apples', 'Oranges', 'Bananas', 'Apricots']

* Use of extend

products = ["Apples", "Oranges", "Bananas"]

products = ["Apricots", "Mangoes"]

products.extend(new products)

print(products)

output:- ['Apples', 'Oranges', 'Bananas', 'Apricots', 'Mangoes']

1. **Write a Python function to get the largest number, smallest num and sum of all from a list.**

Ans:-

* function max():-  
  It basically returns the name with the highest value, ordered alphabetically. max is a built-in function in python, which is used to get max value from a sequence.
* Function min():-

The min() function returns the item with the lowest value, or the item with the lowest value in an iterable.

* Example:-

l = int(input("Enter a list of numbers: "))

print("min is: ",min(l))

print("max is: ",max(l))

1. **How will you compare two lists?**

Ans:- You can use the set() function to create set objects using the given lists and then compare the sets for equality using the == operator. The order of the original list items is not important, because the == operator returns true when each set contains identical items in any order.

1. **What is tuple? Difference between list and tuple.**

Ans:- Tuple is a group of different type of data surrounded with round brackets.

Difference:-

The key difference between the tuples and lists is that while the tuples are immutable objects the lists are mutable. This means that tuples cannot be changed while the lists can be modified.

1. **How will you create a dictionary using tuples in python?**

Ans:- In Python, use the dict() function to convert a tuple to a dictionary. A dictionary object can be created with the dict() function. The dictionary is returned by the dict() method, which takes a tuple of tuples as an argument. A key-value pair is contained in each tuple.

1. **How Do You Traverse Through A Dictionary Object In Python?**

Ans:- Iterating through a dictionary means, visiting each key-value pair in order. It means accessing a Python dictionary and traversing each key-value present in the dictionary. Iterating a dictionary is a very important task if you want to properly use a dictionary.

* There are multiple ways to iterate through a dictionary, we are discussing some generally used methods for dictionary iteration in Python which are the following:
* Iterate Python dictionary using build.keys()
* Iterate through all values using .values()
* Looping through Python Dictionary using for loop
* Iterate key-value pair using items()
* Access key Using map() and dict.get
* Access key in Python Using zip()
* Access key Using Unpacking of Dict

1. **How Do You Check The Presence Of A Key In A Dictionary?**

Ans:- Check if a key exists in a Python dictionary by using methods like keys() and in, has\_key(), get(),handling KeyError exceptions,or employing count() on a list of keys. These techniques offer straightforward and efficient ways to verify key presence.

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

Ans:- The zip() function in Python is used to combine two or more iterable [dictionaries](https://www.geeksforgeeks.org/python-dictionary/) 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.

1. **How Many Basic Types Of Functions Are Available In Python?**

Ans:- 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.

1. **How can you pick a random item from a list or tuple?**

Ans:- 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.

1. **How can you pick a random item from a range?**

Ans:- Select the Random Value from a List

* Using random. choice()
* Using random. randrange()
* Using random. randint()
* Using random. random()
* Using random. sample()
* Using random. choices()
* Using numpy. random. choice()
* Select k random value from a list.

1. **How can you get a random number in python?**

Ans:- To generate random number in Python, randint() function is used. This function is defined in [random module](https://docs.python.org/3.6/library/random.html).

# Program to generate a random number between 0 and

print(random.randint(0,9))

1. **How will you set the starting value in generating random numbers?**

Ans:- 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.

1. **How will you randomizes the items of a list in place?**

Ans:- The method shuffle() can be used to randomize the items of a list in place. It should be noted that this function is not accessible directly and therefore we need to import or call this function using random static object.

Syntax:   shuffle (list)

Here, ‘list’ is passed as a parameter which could be a list or tuple. The shuffle() returns a reshuffled list of items.