

# Module-3

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

The zip() function returns a zip object, an iterator of tuples where the first item in each passed iterator is paired together, and then the second item in each passed iterator are paired together etc.

If the passed iterables have different lengths, the iterable with the least items decides the length of the new iterator.

## 2. What is tuple? Difference between list and tuple.

A tuple in Python is an ordered and immutable collection of values.

### **Difference between list and tuple:**

<b>Tuple</b>	<b>List</b>
1. Tuple is ordered and unchangeable.	1. The list is ordered and changeable.
2. Once defined, tuples have fixed length.	2. Once defined, lists have dynamic length.
3. Tuples are written using round brackets.	3. Lists are written using square brackets.

## 3. How Many Basic Types Of Functions Are Available In Python?

There are three types of functions available in python.

### (1)Built-in function:

Functions that come built into the Python language itself are called built-in functions and are readily available to us. Eg: input(),eval(),print() etc...

### (2)User defined function:

Functions that we define ourselves to do certain specific task are referred as user-defined functions. Eg:checkNoEvenOdd(20)

### (3) Anonymous functions :

Lambda functions are also known as “anonymous functions” because they don’t require a named function to be created.

## 4.Differentiate between append () and extend () methods?

<b>Append() method</b>	<b>Extend() method</b>
1.The append() method adds a single element to the end of a list.	1.The extend() method adds multiple elements to the end of a list.
2.It takes only one argument, which is the element to be added.	2.It takes an iterable (such as a list, tuple, or string) as an argument, and adds all its elements to the list.
3.The append() method modifies the original list.	3.The extend() method modifies the original list.

## 5. What is List? How will you reverse a list?

### **List:**

In Python, a list is a collection of items that can be of any data type, including strings, integers, floats, and other lists. Lists are denoted by square brackets [] and are ordered, meaning that the order of the items in the list matters. Lists are also mutable, meaning that they can be modified after they are created.

### **Reverse a list:**

There are several ways to reverse a list in Python:

Method 1: Using the reverse() method

Method 2: Using slicing

Method 3: Using reversed() function