**1.Difference between list and tuple**

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| --- | --- | --- |
| 1 | Lists are mutable | Tuples are immutable |
| 2 | Implication of iterations is Time-consuming | The implication of iterations is comparatively Faster |
| 3 | The list is better for performing operations, such as insertion and deletion. | Tuple data type is appropriate for accessing the elements |
| 4 | Lists consume more memory | Tuple consume less memory as compared to the list |
| 5 | Lists have several built-in methods | Tuple does not have many built-in methods. |
| 6 | The unexpected changes and errors are more likely to occur | In tuple, it is hard to take place. |

**2.What is the use of pass,break and continue statements**

The break statement in Python terminates the current loop and resumes execution at the next statement, just like the traditional break found in C.

The most common use for break is when some external condition is triggered requiring a hasty exit from a loop. The break statement can be used in both while and for loops.

The continue statement in Python returns the control to the beginning of the while loop. The continue statement rejects all the remaining statements in the current iteration of the loop and moves the control back to the top of the loop.

The continue statement can be used in both while and for loops.

The pass statement in Python is used when a statement is required syntactically but you do not want any command or code to execute.

The pass statement is a null operation; nothing happens when it executes. The pass is also useful in places where your code will eventually go, but has not been written yet

**3.What is the use of else statement in for loop**

Python supports to have an else statement associated with a loop statements.

* If the else statement is used with a for loop, the else statement is executed when the loop has exhausted iterating the list.
* If the else statement is used with a while loop, the else statement is executed when the condition becomes false.

**4.What are split and join**

split() Function in python splits the string into smaller chunks, or strings. Split Function in python usually splits the string with whitespace as a separator

string.split()

The join() method is a string method and returns a string in which the elements of sequence have been joined by str separator. Syntax: string\_name.join(iterable) string\_name: It is the name of string in which joined elements of iterable will be stored. oin() function in Python

**5.What are different operators**

Python language supports the following types of operators.

1. Arithmetic Operators
2. Bitwise Operators
3. Membership Operators
4. Identity Operators
5. Comparison Operators
6. Assignment Operators
7. Logical Operators

**6.What are args and kwargs**

The special syntax \*args in function definitions in python is used to pass a variable number of arguments to a function. It is used to pass a non-key worded, variable-length argument list.

The special syntax \*\*kwargs in function definitions in python is used to pass a keyworded, variable-length argument list. We use the name kwargs with the double star. The reason is because the double star allows us to pass through keyword arguments (and any number of them).

**7.Difference between For loop and While loop and when do you choose to use them**

For loop is generally used to iterate through the elements of various collection types such as List, Tuple, Set, and Dictionary.While loop is the actual looping feature that is used in any other programming language. This is how Python differs in handling loops from the other programming languages.

**8.Will the do-while loop work if you don’t end it with a semicolon?**

Python does not support an intrinsic do-while loop. Secondly, to terminate do-while loops is a necessity for languages like C++.

**9.What is slicing?**

Slicing is a technique that allows us to retrieve only a part of a list, tuple, or string. For this, we use the slicing operator [].

**10.What is recursion**

When a function makes a call to itself, it is termed [recursion](https://data-flair.training/blogs/recursion-in-python/). But then, in order for it to avoid forming an infinite loop, we must have a base condition.

**11.Explain Python List Comprehension.**

The [list comprehension in python](https://data-flair.training/blogs/python-list-comprehension/) is a way to declare a list in one line of code. Let’s take a look at one such example.

**12.How will you remove a duplicate element from a list?**

We can turn it into a set to do that.

>>> list=[1,2,1,3,4,2]

>>> set(list)

{1, 2, 3, 4}

**13.Is python case sensitive and how do you convert a string into uppercase and lower case**

Yes Python is Case sensitive.

.lower() – to change the characters to lower case

.upper()-To change the characters to uppercase

**14.What is indentation**

Indentation in Python refers to the (spaces and tabs) that are used at the beginning of a statement . The statements with the same indentation belong to the same group called a suite

**15.What are immutable data types**

Python Immutable data types are objects that cannot be modified and altered. This means after creating an object you can’t add new elements, remove an element, replace an element.

Here is a list of immutable data types in Python are:

* [Tuple](https://tutorial.eyehunts.com/python/python-tuples-tuorial-example/)
* [Int](https://tutorial.eyehunts.com/python/python-print-format-decimal-places-example-code/)
* [Float](https://tutorial.eyehunts.com/python/python-float-variable-declare-and-use-floating-point/)
* Complex
* Stringfrozen set [note: immutable version of set]
* Bytes

**16.What is lambda**

A lambda function is a small anonymous function.

A lambda function can take any number of arguments, but can only have one expression.

Syntax

lambda *arguments*: *expression*

**17.What is the difference between items and enumerate**

* Enumerate() is one of the built-in Python functions. It returns an enumerate object. In our case that object is a list of tuples (immutable lists), each containing a pair of count/index and value.
* items () method is used to return the list with all dictionary keys with values. Syntax: dictionary.items () Parameters: This method takes no parameters. Returns: A view object that displays a list of a given dictionary’s (key, value) tuple pair.

**18.What are the key features of Python?**

If it makes for an introductory language to programming, Python must mean something. These are its qualities:

* Interpreted
* Dynamically-typed
* Object-oriented
* Concise and simple
* Free
* Has a large community

**19.What is a function?**

Answer:

When we want to execute a sequence of statements, we can give it a name. Let’s define a function to take two numbers and return the greater number.

>>> def sum(a,b):

return a+b

**20.Map,reduce,filter**

These are three functions which facilitate a functional approach to programming.

Map applies a function to all the items in an input\_list. As the name suggests, filter creates a list of elements for which a function returns true. Reduce is a really useful function for performing some computation on a list and returning the result. It applies a rolling computation to sequential pairs of values in a list.