20 Python interview questions

[**Q.1  What is different between List and Tuple?**](https://www.360digitalgyan.com/what-is-different-between-list-and-tuplenbsp)

**Lists** and **Tuples**store one or more objects or values in a specific order.   
The objects stored in a list or tuple can be of any type including the nothing type defined by the None Keyword.

The main difference between lists and a tuples is the fact that lists are **mutable**whereas tuples are **immutable**.

**Syntax Differences**

Lists are surrounded by square brackets [] and Tuples are surrounded by parenthesis ().

a= [1,2,3,4]

b= (1,2,3,4)

**Mutable List vs Immutable Tuples**

List has mutable nature i.e., we can be changed or modified after its creation according to needs whereas tuple has immutable nature i.e., tuple can’t be changed or modified after its creation.  
  
**Remeber**

1. The literal syntax of tuples is shown by parentheses () whereas the literal syntax of lists is shown by square brackets [] .
2. Lists has variable length, tuple has fixed length.
3. List has mutable nature, tuple has immutable nature.
4. List has more functionality than the tuple.

[**Q.2  What is dictionary in Python?**](https://www.360digitalgyan.com/what-is-dictionary-in-python)

Python dictionary is an unordered collection of items. While other compound data types have only value as an element, a dictionary has a key: value pair.

Dictionaries are optimized to retrieve values when the key is known.

**How to create a dictionary?**

Creating a dictionary is as simple as placing items inside curly braces {} separated by comma.

An item has a key and the corresponding value expressed as a pair, key: value.

[**Q.3  What are the built-in type does python provides?**](https://www.360digitalgyan.com/what-are-the-built-in-type-does-python-provides)

There are mutable and Immutable types of Pythons built in types  
**Mutable built-in types**

1. List
2. Sets
3. Dictionaries

**Immutable built-in types**

1. Strings
2. Tuples
3. Numbers

Q 4 [**What Is A Tuple In Python?**](https://www.360digitalgyan.com/what-is-a-tuple-in-python)

A tuple is a collection type data structure in Python which is immutable.

They are similar to sequences, just like the lists. However, There are some differences between a tuple and list; the former doesn’t allow modifications whereas the list does.

Also, the tuples use parentheses for enclosing, but the lists have square brackets in their syntax.

[**Q.5  What are types of Operator are used in Python?**](https://www.360digitalgyan.com/what-are-types-of-operator-are-used-in-pythonnbsp)

* Arithmetic Operators
* Comparison Operators
* Python Assignment Operators
* Logical Operators or Bitwise Operators
* Membership Operators
* Identity Operators

Q6 When do you choose list over tuple?

When there is an immutable ordered list of elements we choose tuple. Because we cannot add/remove an element from the tuple. On the other hand, we can add elements to a list using append () or extend() or insert(), etc., and delete elements from a list using remove() or pop(). Simple tuples are immutable, and lists are not.

[**Q.7  What Is A Built-In Function That Python Uses To Iterate Over A Number Sequence?**](https://www.360digitalgyan.com/what-is-a-built-in-function-that-python-uses-to-iterate-over-a-number-sequence)

Range() generates a list of numbers, which is used to iterate over for loops.

**[Q8 How does For loop and While loop differ in Python and when do you choose to use them?](javascript:%20void(0))**

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.

[**Q.9  What is pass in Python?**](https://www.360digitalgyan.com/what-is-pass-in-python)

Pass means, no-operation Python statement, or in other words it is a place holder in compound statement, where there should be a blank left and nothing has to be written there.

[**Q.10  What Does The Continue Do In Python?**](https://www.360digitalgyan.com/what-does-the-continue-do-in-pythonnbsp)

The continue is a jump statement in Python which moves the control to execute the next iteration in a loop leaving all the remaining instructions in the block unexecuted.

The continue statement is applicable for both the “while” and “for” loops.

[**Q.11  When Should You Use The “Break” In Python?**](https://www.360digitalgyan.com/when-should-you-use-the-ldquobreakrdquo-in-pythonnbsp)

Python provides a break statement to exit from a loop. Whenever the break hits in the code, the control of the program immediately exits from the body of the loop.

The break statement in a nested loop causes the control to exit from the inner iterative block.

[**Q.12  What Is The Difference Between Pass And Continue In Python?**](https://www.360digitalgyan.com/what-is-the-difference-between-pass-and-continue-in-pythonnbsp)

The continue statement makes the loop to resume from the next iteration.

On the contrary, the pass statement instructs to do nothing, and the remainder of the code executes as usual.

[**Q.13  What is lambda in Python?**](https://www.360digitalgyan.com/what-is-lambda-in-python)

anonymous function means that a function is without a name. As we already know that def keyword is used to define the normal functions and the lambda keyword is used to create anonymous functions.  
 **lambda arguments: expression**

[**Q.14  Mention what are the rules for local and global variables in Python?**](https://www.360digitalgyan.com/mention-what-are-the-rules-for-local-and-global-variables-in-python)

**Local variables**: If a variable is assigned a new value anywhere within the function's body, it's assumed to be local.

**Global variables**: Those variables that are only referenced inside a function are implicitly global.

[**Q.15  Mention the use of the split function in Python?**](https://www.360digitalgyan.com/mention-the-use-of-the-split-function-in-python)

The use of the split function in Python is that it breaks a string into shorter strings using the defined separator. It gives a list of all words present in the string.

[**Q.16  What Is The Return Keyword Used For In Python?**](https://www.360digitalgyan.com/what-is-the-return-keyword-used-for-in-pythonnbsp)

The purpose of a function is to receive the inputs and return some output.

The return is a Python statement which we can use in a function for sending a value back to its caller.

[**Q.17  What is \*args and \*\*kwargs?**](https://www.360digitalgyan.com/what-is-args-and-kwargs)

\*args is used when the programmer is not sure about how many arguments are going to be passed to a function, or if the programmer is expecting a list or a tuple as argument to the function.

\*\*kwargs is used when a dictionary (keyword arguments) is expected as an argument to the function.

[**Q.18  What Is A Function In Python Programming?**](https://www.360digitalgyan.com/what-is-a-function-in-python-programming)

A function is an object which represents a block of code and is a reusable entity. It brings modularity to a program and a higher degree of code reusability.

Python has given us many built-in functions such as print() and provides the ability to create user-defined functions.

[**Q.19  What Does The Ord() Function Do In Python?**](https://www.360digitalgyan.com/what-does-the-ord-function-do-in-python)

The ord(char) in Python takes a string of size one and returns an integer denoting the Unicode code format of the character in case of a Unicode type object, or the value of the byte if the argument is of 8-bit string type.

[**Q.20  Is It Mandatory For A Python Function To Return A Value?**](https://www.360digitalgyan.com/is-it-mandatory-for-a-python-function-to-return-a-valuenbsp)

 It is not at all necessary for a function to return any value. However, if needed, we can use None as a return value.