

Nail Your Next Job Interview:

# LEAKED PYTHON INTERVIEW QUESTIONS



# INTRODUCTION

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Being fluent in a programming language can guarantee you a hefty salary and a great job position. Out of the thousands of programming languages that are currently out there, Python has shown itself to be on the top of the most popular language list. Let's take it from the top and start off by covering the more general Python interview questions and answers. These are questions that you are most likely to get asked at the beginning of the interview, just to see if you truly do have the fundamental understanding about Python. After that, we'll move on to some technical questions and finish off with a few general tips and advice.

A photograph of three people in an office setting. A man with glasses is seated at a desk, looking at a laptop. Two women are standing behind him, looking at the screen. The image is overlaid with a semi-transparent purple filter. The text 'Common Interview Questions' is written in white over the lower half of the image. The laptop lid has a red logo that says 'CANALERO' with a stylized red 'V' shape below it.

# Common **Interview** Questions



## 1 What is Python?

As you've probably expected, this is one of the very first Python interview questions that you're bound to get asked. Your employers are probably going to expect a concise and thorough answer, so let's provide them one.

**Python is a portable, high-level programming language that has inbuilt automatic memory management,** threads, strings, is object-based. It is loved for the simplicity and built-in data structure - the fact that Python is open source also contributes to its fame.

## 2 Why is Python Better Than Java?

Some of your Python interview questions might involve comparisons with other programming languages - these can be random, but Java seems like the most common one that employers ask.

In short, **Python (when compared with Java) is easier to use and has much better coding speeds.** Also, when it comes to data, Java is statically typed, while Python offers dynamic typing. This is considered to be a huge advancement.

## 3 How Many Data Types are There in Python?

One of the more common interview questions on Python - you might get asked to either say the number or actually name them. Python has five different data types:

1. String

2. List

3. Number

4. Dictionary

5. Tuple

## 4 What is “Pickling” and “Unpickling”

**Pickling happens when a module within Python is accepted and converted into a string module**, and then later dumped into the file.

As opposed to that, **unpickling is when you retrieve the string module from the file.**

For such comparison-based Python interview questions, try to keep your explanations as simple as possible. Your potential employers will probably appreciate that you are able to explain tough topics in a simple-to-understand manner.

## 5 What is ‘Lambda’?

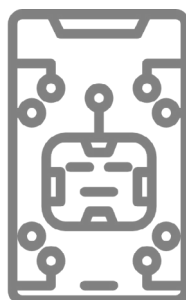
This one's pretty straight forward. To put it simply - lambda is an anonymously performed function with just one, single expression.

## 6 How is Memory Managed Within Python?

**Python's private heap space is responsible for memory management.** It is only accessible by an interpreter - if you're a Python programmer, you won't be able to reach it. The language also has an inbuilt recycler that is responsible for creating more free heap space (this is done by recycling unused memory).

## 7 What is ‘Pass’?

Pass simply indicates a space that should be left blank within the compound statement.



## 8 Can you Copy an Object in Python?

Even though it sounds like one of the basic Python interview questions, you would probably be surprised how many people actually manage to stumble with it.

**Yes, you can copy objects in Python, but not all of them.** The most general and well-known way to do it is to use the `copy.copy()` command.

## 9 How to Delete a File in Python?

To delete something in Python, use the command: **`os.remove(name_of_the_file)`**

## 10 What is a 'Dictionary'

A dictionary is an in-built data type. Dictionaries are comprised of keys and the key corresponding values. Here's an example:

```
dict={'Car': 'Ford', 'Type': 'Mustang', 'Year': '1967'}  
print dict[Car]  
Ford  
print dict[Type]  
Mustang  
print dict[Year]  
1967
```

## 11 How is 'Tuple' and a 'List' Different?

The main difference is that **lists are slower**, but they can be edited, while **tuples work faster**, but cannot be modified.

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## 13 Is Python an Interpreted Language?

Again, one of the most commonly asked Python coding interview questions - you should definitely keep this in mind.

Yes, Python is an interpreted programming language. What does this mean? It's a three-way process - you write the source code, Python converts it into an intermediate language (for easier understanding) and then it's yet again changed into machine codes that are then executed.

## 14 Bonus: Practice

### Which of these is wrong?

- a) `xyz = 5,000,000`
- b) `x,y,z = 1000, 3000, 7000`
- c) `x y z = 1000 3000 7000`
- d) `x_y_z = 5,000,000`



C is the only one that's wrong.

## 15 How is Python Object - Oriented ?

Object-oriented programming languages (OOPs) are based on classes and objects of those classes. Python is exactly that. More so, **Python possesses the features that are credited to OOPs - inheritance, polymorphism, etc.**

## 16 What is 'Slicing'?

In Python, slicing is **when you select multiple items from places** like lists, strings and so on.

So - those are the more basic Python interview questions that you might receive during your job interview. Now, let's try and move more towards the advanced stuff and some untouched Python technical interview questions.

## 17 Leaked Exercises

***Write a piece of code that would calculate a list of given numbers.***

```
def list_sum(num_List):  
    if len(num_List) == 1:  
        return num_List[0]  
    else:  
        return num_List[0] + list_sum(num_List[1:])  
print(list_sum([3, 5, 8, 9, 9]))
```

***Write a piece of code that would randomize items from the list.***

```
from random import shuffle  
x = ['Skyrim', 'Belongs', 'To', 'The', 'Nords']  
shuffle(x)  
print(x)
```



A person is sitting at a desk, using a laptop and a tablet. The laptop screen shows a list of items, and the tablet shows a map. A pair of sunglasses is on the desk next to the laptop. The entire image has a purple overlay.

# Advanced **Interview** Questions

## 18 Is There a Difference Between 'Range' and 'Xrange'?

Yes, albeit it might not be noticeable at first. In terms of functionality and the tasks they perform, both commands are nearly identical.

The key difference, however, is that **range (when used) brings back a list object, while xrange returns an xrange object.**

## 19 What is the Dogpile Effect?

This is one of the Python interview questions that might be tricky to memorize at first, so do give it a few good tries.

A **Dogpile effect happens when a website's cache expires**, yet it is hit by many different requests from the user. This can cause many different problems, from lag spikes to complete crashes.

A system called semaphore lock is used to prevent Dogpiles from happening.

## 20 Explain what is Called 'Encapsulation'

Encapsulation is one of the features that Python has because it's an object-oriented programming language.

Encapsulation is a process of **grouping related data members into one, single place**. Along with the member themselves, encapsulation also returns their functions, too.

## 21 When Does Abnormal Termination Happen?

First of all, it should be said - abnormal termination is bad. You don't want it to happen in your coding experience, although it's almost unavoidable at one point or another, especially when you're a beginner programmer.

**Abnormal termination is a crash of your program in the middle of its execution**, while the main tasks are still running. This is usually caused by a faulty code or some software issues.

## 22 Leaked Interview Exercise

*If you would need to count all of the capital letters in a file. How would you do it?*

```
with open(I_LIKE_APPLES) as fh:
count = 0
text = fh.read()
for character in text:
if character.isupper():
count += 1
```

## 23 Does Python Have a Compiler?

This is actually one of the tougher Python interview questions, mostly because not many people pay attention to it.

**Python indeed does have its own compiler**, but it's rather easy to miss. This is because it works automatically - you don't really notice it.

## 24 What is Monkey Patching?

Monkey patching refers to modifications that you would make to the code when it's already running.

## 25 Leaked Interview Exercises

**Write a piece of code that could save images locally.** For the exercise imagine that you know the image URL.

```
import urllib.request
urllib.request.urlretrieve("URL", "image-name.jpg")
```

**Question: If list1 is [4, 6, 8, 1, 0, 3], what will list1[-1] be?**

Answer: "-1" always points to the last index in a list, so the answer would be 3.

## 26 What is a 'Decorator'

Decorators are used to inserting new and fresh pieces of code into an already existing class or function. With the help of decorators, you can make these codes run before or after the original one.

## 27 What do the Functions 'help()' and 'dir()' do?

Both of these functions can be accessed from the Python interpreter. They are used to view consolidated dumps from inbuilt functions.

help() shows you the documentation string, while dir() displays the defined symbols.

## 28 What are the 'sub()', 'subn()' and 'split()' Methods?

A module called "re" lets you modify your strings in Python. There are three methods of how you can do this:

sub(): finds specific strings and replaces them.

subn(): same as the sub(), but also return the new strings with the exact number of replacements.

split(): splits a specific string into a list.

This is a very general overview of the three "re" methods of string modifications within Python. It is advisable to do more research on this topic before your job interview - these strings are usually a part of very popular Python interview questions that potential employers ask their job nominees.

## 29 What do the Processes of 'Compiling' and 'Linking' do?

Compiling lets you compile new extensions within your code without any errors. After that, linking can be a fluid process - a successful compilation smoothens out linking and eliminates any possible issues throughout the process.

This can be considered one of the more easier Python coding interview questions if your potential employer doesn't ask you to go in-depth.





# GENERAL TIPS

One good way to leave a good impression is to not act like your life depends on the outcome of the interview - if you're sitting there and trying to answer Python technical interview questions while sweating profusely and shaking like a leaf, you might scare the person your talking to.

Also, don't be cocky - sure, you might have 20 years of expert Python experience, but what good will that do you if you don't get the job only because you scoffed at some of the easier Python coding interview questions and came off as arrogant because of it?

Get a good night's sleep and don't worry about it - show your potential employer the person that you truly are, and you'll be likely to succeed.