



PYTHON INTERVIEW QUESTIONS



#21-30



How to create a MySQL connection with python?

- MySQL is one of the very popular database management systems. Once after installing MySQL on the system, it is possible to store and retrieve data from MySQL using Python.

Install mysql-connector Python module using the **pip tool**.

Import **mysql.connector** to your Python program.



```
import mysql.connector  
myDBMS = mysql.connector.connect( host="localhost", user="your_user_name", passwd="your_password" )
```



How to define an empty class in Python?

- An empty class is nothing but the class without any variable or method inside it. It is just a place holder for class
- In Python, we can use **pass** keyword to create an empty class

```
#define class
class sample:
    pass

#creating object of the class
obj = sample()
```



How to sort characters in a string?

- We can use Python inbuilt function `sorted()`.
- When you pass a string to the `sorted()` function, it returns a list of characters in sorted order.
- Then use `join()` string method. I will concatenate all the characters in the list to form a single string.



```
strMsg="interview"  
print( "".join(sorted(strMsg)) )
```

Output:

eeiinrtvw



How does Python Garbage Collection work?

- Garbage collection is a memory management technique that is used to free up memory by deleting unwanted objects.
- Python uses the reference count mechanism for garbage collection.

What is a map function?

- The map is a built-in function, which takes function and list as an input and returns the new list by applying a given function on each element in the give list.



- **Example:** Write a Python program to generate the new list where each element will be square of the element from the given list using the map function.

```
objFun = lambda x: x**2  
li=[3, 5, 6, 7]  
objMap = map(objFun, li)  
print(list(objMap))
```

Output:

[9, 25, 36, 49]



What is Virtual Environment in Python? Why is it needed?

- A virtual environment is very useful to separate your project environment from the global Python environment on your system.
- To create a virtual environment for your project, you have to install the Virtual Environment module.
- There can be multiple questions you will be asked in the interview like commands for creating, activating the virtual environment.



What is Dynamic Typing in Python?

- Answer: While declaring or initializing the variable in Python programming, it is not required to mention the data type of the variable.
- The Data type of the variable will be based on the type of data you assign to the variable.

Example:

Variable initialization in C programming -> `int var = 12;`

Variable initialization in Python programming -> `var = 12`

A variable var is an integer data type. -> `var = "CSEstack"`

- A variable var is a string data type variable



Justify: Everything is an object in Python?

What is an object?

- In programming, an object is an entity that has attributes and methods associated with it.
- In Python, the definition of the object is looser. Some objects may not have an argument or method, but it can be assigned to a variable or passed as an argument to other functions.

In Python, everything is considered as an object as it can fall into either one of the following.

- Most of the things have attributes and methods.



- Some of the class objects are subclassable.
- Everything can be assigned to a variable, can be passed as an argument to functions.

Some of the examples of Python objects.

- Function name: All the functions in Python have built-in attribute `__doc__`. It returns the document string defined in the source code of the function. Interestingly, the function name can be passed as an argument to other functions.
- Module `sys`: It has an attribute `path`.

What are the Useful Python libraries for General AI?

- pyDatalog
- AIMA
- EasyAI
- SimpleAI

What are the Python modules supporting Neural Networking?

- PyAnn
- pyrenn
- ffnet
- neurolab

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