

1)What is list? How will you reverse a list?

ANS:   Lists are used to store multiple items in a single variable.

Lists are one of 4 built-in data types in Python used to store collections of data, the other 3 are Tuple, Set, and Dictionary, all with different qualities and usage.

A list is an ordered data structure with elements separated by a comma and enclosed within square brackets.

 A built-in function called reverse() is used to reverse the list .

This simple and quick way to reverse a list requires little memory.

Syntax: list\_name. reverse()

Here, list\_name means you have to write the list's name, which has to be reversed.

2) Differentiate between append() and extend() methods?

ANS:-Difference between append and extend are:-

append()

* Add single element to the end of the list
* Takes single element as argument
* Length of the list will be increased by 1
* Ex(1,2)

extend()

* can add multiple individual elements to the end of the list.
* takes an iterable as argument
* length of the list depends on the length of the iterable
* Ex([1,2])

3) How you will compare two lists?

ANS:-To compare two lists, we are using the set method.

1. If the length of the two lists is different, the list can not be identical and return False.
2. Else, Convert both the lists into sets.
3. Compare these two sets. If the sets are equal, two given lists are the same. Otherwise, two lists are different.
4. sort() method sorts the two lists and the == operator compares the two lists item by item which means they have equal data items at equal positions.
5. This checks if the list contains equal data item values but it does not take into account the order of elements in the list.

4)How you will create a dictionary using tuples in python?



*ANS:-* Let's add value as list in the resultant dictionary using setdefault() method. Follow the below steps to complete the code.

1. Initialize the list with tuples.
2. Iterate over the list of tuples.
3. Set default value for the key and append the value.
4. Print the result.
5. In Python, use the dict() function to convert a tuple to a dictionary.

A dictionary object can be created with the dict() function.

The dictionary is returned by the dict() method, which takes a tuple of tuples as an argument.

5)How do you traverse through a dictionary object in python?

ANS:-There are multiple ways to iterate over a dictionary in python.

1. Access key using the build .keys()
2. Access key without using a key()
3. Iterate through all values using .values()
4. Iterate through all key, and value pairs using items()
5. Access both key and value without using items()
6. Print items in Key-Value in pair

6)How do you check the presence of key in a dictionary?

ANS:- **There can be different ways for checking if the key already exists, we have covered the following approaches:**

1. Using the Inbuilt method keys()

2. Using if and in

3. Using has key() method

4. Using get() method

Using the Inbuilt method keys() method returns a list of all the available keys in the dictionary.

With the Inbuilt method keys(),use if statement with ‘in’ operator to check if the key is present in the dictionary or not.

7)Why do you use zip() method in python?

ANS:- Python zip() Function uses are here:

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

Then the second item in each passed iterator are paired together etc.

When you zip something, you bring both sides together.

And that's how the zip() function works!

It brings elements of the same index from multiple iterable object together as elements of the same tuples.

8) How many basic types of functions are available in python?

ANS:-Define a function with the def keyword, then write the function identifier(name) followed by parentheses and a colon.

The next thing you have to do is make sure you indent with a tab or for spaces, and then specify what you want the function to do for you

There are **three** types of functions in Python:

Built-in functions, such as:

open() to open the file

close() to close the file

help() to ask for help

min() to get the minimum value

max() to get maximum value

print() to print an object to the terminal

9) How can you pick a random item from a list or tuple?

ANS:-

Use random.choice(seq) which is inbuilt function in Random Module.

It will return the randomly selected element.

“seq” could be list, tuple or string but should not be empty.

Use the random.sample() function when you want to choose multiple random items from a list without repetition or duplicates.

There is a difference between choice() and choices() .

The choices() was added to choose n elements from the list randomly, but this function can repeat items.

10) How you can get random number in python?

ANS:-To generate random number in Python

We use randint() function .

This function is defined in random module.

11)How you will set the starting value in generating random numbers?

ANS:- Numbers aren't truly random, because they are simply generated with an algorithm.

A pseudo-random number generation algorithm starts with a value called a seed value .

Random number generation is a process by which, often by means of a random number generator (RNG) , a sequence of numbers or symbols that cannot be reasonably predicted better than by random chance is generated.

12) How you will randomizes the items of a list?

ANS:-Python Random shuffle () method is used to randomize items:  
  
The shuffle() method takes a sequence, like a list, and reorganize the order of the items.

This method changes the original list, it does not return a new list.

Use the random. sample() function to shuffle all the list elements randomly by passing the input list, and length of an input list using the len() function as argument.

The number of items in an object is returned by the len() method.

13) What is file function in python? What is keywords to create and write file?

ANS:- A file object allows us to use, access and manipulate all the user accessible files. One can read and write any such files

Writing to Files in Python

In order to write into a file in Python, we need to open it in write mode by passing "w" inside open() as a second argument.

How to create a text file in python

1. Step 1) Open the .txt file f= open("new\_file.txt","w+") ...
2. Step 2) Enter data into the file for i in range(10):
3. f.write(this is file=+1) ...
4. Step 3) Close the file instance f.close()
5. Step 1) f=open("new\_file.txt", "a+")

14) Explain Exception handling? What is an error in python?

ANS:- An exception in Python is an incident that happens while executing a program that causes the regular course of the program’s commands to be disrupted.

When a Python code comes across a condition it can't handle, it raises an exception.

An object in Python that describes an error is called an exception.

There are mainly two types of errors in python programming

namely – Syntax errors and Logical errors or Exceptions.

Whenever we do not write the proper syntax of the python programming language (or any other language) then the python interpreter throws an error known as syntax error.

15)How many except statements can a try -except-else block have? Name some built-in exception classes:

ANS:- try-except-else blocks can be used to catch and respond to one or multiple exceptions.

In cases where a process raises more than one possible exception, they can all be handled using a single except clause.

Built-in exceptions are :-

* Type error Raised when two different types are combined
* System error Raised when a system error occurs
* Tab error Raised when indentation consists of tabs or spaces
* Name error Raised when a variable does not exist
* Syntax error Raised when a syntax error occurs
* Key error Raised when a key does not exist in a dictionary
* Name error Raised when a variable does not exist
* Exception Base class for all exceptions.

16) Can one block of except statements handle multiple exception?

ANS:- You can also have except block handle multiple exceptions.

To do this, use parentheses.

Without that, the interpreter will return a syntax error.

17)When is the finally block executed?

ANS:- The finally block always executes when the try block exits.

This ensures that the finally block is executed even if an unexpected exception occurs.

A finally block always executes, regardless of wheather an exception is thrown.

The following code example uses a try / catch block to catch an ArgumentOutOfRangeException

18)How do you handle Exceptions with try / Except / Finally in python? Explain with coding snippets.

ANS:- To handle the exception, we have put the code,

result = numerator/denominator inside the try block.

Now when an exception occurs, the rest of the code inside the try block is skipped

The except block catches the exception and statements inside the except block are executed.

try:

a=10

b=2

result=a/b

print(result)

except:

print(“error!”)

finally:

print(“this is finally block!”)

19) What are oops concepts? Is multiple inheritance supported in java?

ANS:- Inheritance is one of the core concepts of Object-Oriented Programming.

Multiple Inheritance is the process in which a subclass inherits more than one superclass.

Java does not support multiple inheritance;

however, Java interfaces help us achieve Multiple Inheritance of type in Java.

20)How to define class in python? What is self? Give an example of a python class?

ANS:- A class describes the contents of the objects that belongs to it.

it describes an aggregate of data fields (called instance variables), and defines the operations (called methods).

Object: an object is an element (or instance) of a class; objects have the behaviors of their class.

Self represents the instance of the class. By using the “self” we can access the attributes and methods of the class in python.

Ex of python class is :

Class fruits

a=chickoo

21)Explain iniheritance in python with an example? What is init? Or what is a constructor in python?

ANS:-inheritance allows us to define a class that inherits all the methods and properties from another class.

Parent class is the class being inherited from, also called base class.

Child class is the class that inherits from another class, also called derived class.

The \_\_init\_\_ method is the Python equivalent constructor in an object-oriented approach.

The \_\_init\_\_ function is called every time an object is created from a class

.\_\_init\_\_ method lets the class initialize the object's attributes and serves no other purpose.

It is only used within classes.

22)What is instantiation in terms of oop terminology?

ANS:- Instantiation describes the processes of creating a new object for a class using a new keyword.

When you provide a specific example to illustrate an idea, you instantiate it.

You say you believe in unicorns, but so far you haven't been able to instantiate that belief.