Python Interview Questions For Freshers

1. What distinguishes Python from other programming languages?

Python is one of the most widely used programming languages among data scientists and AIML experts. Python's popularity stems from the following key features:

- Python is simple to learn because of its simple syntax and readability.

- Python is simple to interpret, making debugging a breeze.

- Python is also free and open-source, allowing it to be utilized with a variety of languages.

- It is an object-oriented language that recognizes class concepts.

- It's simple to combine with other languages like C++, Java, and others.

2. What are the keywords used in Python?

Keywords are reserved words used as identifiers, function names, and variable names in Python. They aid in the definition of the language's structure and grammar.

3. What are Literals in Python and how do you differentiate between them?

In Python, literals refer to the data stored in a variable or constant. There are several types of literals in Python, including:

1. String Literals: A string literal is a collection of characters enclosed in a code. Depending on the number of quotes used, there can be single, double, or triple strings. Single characters surrounded by single or double quotations are known as character literals.

2. Numeric Literals: These are unchangeable kinds that can be divided into three categories: integer, float, and complex.

3. Boolean Literals: They can have one of two values: True or False, which correspond to the numbers 1 and 0.

4. Special Literals: Special literals are those that are not found in the dictionary.

4. How to install Python?

To install Python, choose Version of Python to Install from the drop-down menu and follow the prompts to download and install the Full Installer. Install Python Executable Installer after downloading it. Wait for the installation process to finish. Python installation in Windows is verified. It's a really simple process once Python has been installed. The next step is to open an IDE and begin writing Python code.

5. What is Python's Purpose?

Python is one of the most widely used programming languages today. All of these programs employ Python for their primary programming requirements, whether you're searching Google, scrolling through Instagram, watching videos on YouTube, or listening to music on Spotify. Python is utilized in web development as well as other platforms, apps, and services.

6. How do you start a 5*5 NumPy array with nothing but zeroes?

The.zeros() method will be used: code>import numpy as np n1=np.zeros((5,5)) n1</code>

Use np.zeros() with the dimensions passed in. We'll supply (5,5) to the.zeros() method because we want a 5*5 matrix.

7. What exactly are pandas?

Pandas is a Python package that provides a large number of data structures for data-driven activities. Pandas fit in any function of data operation, whether it's academics or tackling complicated corporate challenges, thanks to their interesting characteristics. Pandas is one of the most important programs to master because it can handle a wide range of files.

8. What are data frames, exactly?

A changeable data structure in pandas is called a data frame. Pandas can handle data that is organized on two axes and is heterogeneous. (Columns and rows)

Using pandas to read files:

- \s1 Import pandas using the PD df=p command. read CSV("mydata.csv")

df is a pandas data frame in this case. In pandas, read CSV() is used to read a comma-separated file as a data frame.

9. What is a Pandas Series, and what does it entail?

A series is a one-dimensional data structure in Pandas that may hold data of nearly any type. It has the appearance of an excel column. It is used for single-dimensional data manipulations and supports multiple operations.

10. What does it mean when pandas form a group?

A pandas groupby is a feature that allows you to separate and group objects using pandas. It is used to group data by classes, entities, which could then be used for aggregation, similar to SQL/MySQL/oracle group by. One or more columns can be used to group a data frame.

11. How do I make a data frame out of a list?

To make a data frame from a list,

1) start by making an empty data frame.

2) Add lists to the list as individual columns.

12. What is the best way to make a data frame from a dictionary?

To generate a data frame, a dictionary can be explicitly supplied as an input to the DataFrame() function.

13. In Pandas, how do you mix data frames?

The concat(), append(), and join() functions in pandas can stack two separate data frames horizontally or vertically.

Concat is a vertical stacking of data frames into a single data frame that works best when the data frames have the same columns and can be used for concatenation of data with comparable fields.

Append() is used to stack data frames horizontally. This is the finest concatenation function to use when merging two tables (data frames).

When we need to extract data from many data frames with one or more common columns, we utilize join. In this situation, the stacking is horizontal.

15. What types of joins can Panda provide?

A left join, an inner join, a right join, and an outside join are all present in Pandas.

16. In Pandas, how do you merge data frames?

The type and fields of the different data frames being merged determine how they are combined. If the data has identical fields, it is combined along axis 0, otherwise, it is merged along axis 1.

17. What is the best way to get the first five entries of a data frame?

We may get the top five entries of a data frame using the head(5) function. df.head() returns the top 5 rows by default. df.head(n) will be used to fetch the top n rows.

18. How can I get to a data frame's last five entries?

We may get the top five entries of a data frame using the tail(5) method. df.tail() returns the top 5 rows by default. df.tail(n) will be used to fetch the last n rows.

19. What are comments, and how do you add them to a Python program?

A piece of text meant for information is referred to as a comment in Python. It's especially important when multiple people are working on a set of codes. It can be used to inspect code, provide feedback, and troubleshoot it. There are two different categories of comments:

1. Comment on a single line

2. Comment with many lines

20. In Python, what is the difference between a list and a tuple?

Tuples are immutable, whereas lists are mutable.

21. In Python, what is a dictionary? Give a specific example.

A Python dictionary is a list of elements that are not in any particular order. Keys and values are written in curly brackets in Python dictionaries. The retrieval of value for known keys is optimized in dictionaries.

22. Find out the mean, median and standard deviation of this numpy array -> np.array([1,5,3,100,4,48])

import numpy as np n1=np.array([10,20,30,40,50,60]) print(np.mean(n1)) print(np.median(n1)) print(np.std(n1))

23. What is the definition of a classifier?

Any data point's class is predicted using a classifier. Classifiers are hypotheses that are used to assign labels to data items based on their classification. To understand the

relationship between input variables and the class, a classifier frequently needs training data. In Machine Learning, classification is a supervised learning strategy.

24. How do you change a string to lowercase in Python?

The method: can be used to convert all uppercase characters in a string to lowercase characters.

string.lower()

ex: string = 'GREATLEARNING' print(string.lower())

o/p: greatlearning

25. What's the best way to get a list of all the keys in a dictionary?

We can get a list of keys in a variety of ways, including: dict.keys()

This method retrieves all of the dictionary's accessible keys.

dict = {1:a, 2:b, 3:c} dict.keys()

o/p: [1, 2, 3]

26. How do you capitalize a string's first letter?

To capitalize the initial character of a string, we can use the capitalize() method. If the initial character is already capitalized, the original string is returned.

Syntax: string_name.capitalize() ex: n = "greatlearning" print(n.capitalize())

o/p: Greatlearning

27. In Python, how do you insert an element at a specific index?

The insert() function is a built-in Python function. It's possible to use it to insert an element at a specific index.

Syntax: list_name.insert(index, element)

ex: list = [0,1, 2, 3, 4, 5, 6, 7]

#insert 10 at 6th index

list.insert(6, 10)

o/p: [0,1,2,3,4,5,10,6,7]

28. How are you going to get rid of duplicate elements from a list?

To delete duplicate elements from a list, you can use a variety of techniques. The most typical method is to use the set() function to convert a list into a set, then use the list() function to convert it back to a list if necessary.

29. What exactly is recursion?

A recursive function is one that calls itself one or more times within its body. One of the most significant requirements for using a recursive function in a program is that it must end, otherwise, an infinite loop would occur.

30. Explain how to use Python's List Comprehension feature.

List comprehensions are used to change one list into a different one. Elements can be included in the new list on a conditional basis, and each member can be modified as needed. It consists of a bracketed statement that precedes a for clause.

31. What is the purpose of the bytes() function?

A bytes object is returned by the bytes() function. It's used to convert things to bytes objects or to produce empty bytes objects of a given size.

32. What are the various types of Python operators?

The following are the basic operators in Python:

Arithmetic (+, -, Multiplication(*), Division(/), Modulus(percent)), Relational (, >, =, >=, ==,!=,), Assignment (=. +=, -=, /=, *=, percent =), Logical (=. +=, -=, /=, *=, percent =), (and, or not), Bitwise Operators, Membership, and Identity

33. What exactly is a 'with statement'?

In Python, the "with" statement is used to handle exceptions. Without utilizing the close() function, a file can be opened and closed while executing a block of code containing the "with" line. It basically makes the code a lot easier to read.

34. In Python, what is the map() function?

In Python, the map() method is used to apply a function to all components of an iterable. Function and iterable are the two parameters that make up this function. The function is supplied as an argument, and it is then applied to all elements of an iterable (which is passed as the second parameter). As a result, an object list is returned.

35. In Python, what is __init__?

In Python, the _init_ function, often known as the function Object() { [native code] } in OOP, is a reserved method. When a class is used to construct an object, the _init_ method is used to access the class attributes.

36. What tools are available to perform the static analysis?

Pychecker and Pylint are two static analysis tools for finding flaws in Python. Pychecker finds flaws in source code and issues warnings regarding the style and complexity of the code. Pylint, on the other hand, checks whether the module adheres to a coding standard.

37. What is the difference between tuple and dictionary?

A tuple differs from a dictionary in that a dictionary is mutable, whereas a tuple is not. In other words, a dictionary's content can be modified without affecting its identity, but this is not allowed with a tuple.

38. In Python, what is the meaning of pass?

Pass is a statement that has no effect when used. To put it another way, it's a Null statement. The interpreter does not ignore this statement, but no action is taken as a result of it. It's used when you don't want any commands to run but yet need to make a statement.

39. In Python, how do you copy an object?

Although not all objects can be duplicated in Python, the majority of them can. To copy an object to a variable, we can use the "=" operator.

40. How do you turn a number into a string?

To convert a number to a string, use the built-in function str().

41. What are the differences between a module and a package in Python?

Modules are the building blocks of a program. A module is a Python software file that imports other characteristics and objects. A program's folder is a collection of modules. Modules and subfolders can be found in a package.

42. In Python, what is the object() function?

The object() method in Python returns an empty object. This object can't have any new attributes or methods added to it.

43. What do NumPy and SciPy have in common?

SciPy stands for Scientific Python, while NumPy stands for Numerical Python. NumPy is the basic library for defining arrays and solving elementary mathematical issues, whereas SciPy is used for more sophisticated problems like numerical integration, optimization, and machine learning.

44. What does len() do?

len() is used to determine the length of a string, a list, an array, and so on. ex: str = "greatlearning" print(len(str)) o/p: 13

45. What does encapsulation mean in Python?

Encapsulation refers to the joining of code and data. Consider a Python class.

46. In Python, what is the type ()?

type() is a built-in method that returns the object's type or creates a new type object based on the inputs passed in.

47. What is the purpose of the split() function?

Split is a function that divides a string into shorter strings using defined separators.

48. What are built-in types does python provide?

Python includes the following data types:

Numbers: Python distinguishes between three types of numbers:

1. All positive and negative numbers without a fractional part are integers.

2. Float: Any real number that may be represented in floating-point format.

3. Complex numbers: x+yj represents a number with a real and imaginary component. x and y are floats, and j is -1 (often known as an imaginary number because of its square root).

Boolean: The Boolean data type is a data type that can only have one of two values: True or False. The letters 'T' and 'F' are capitalized.

A string value is made up of one or more characters enclosed in single, double, or triple quotations.

List: A list object is an ordered collection of one or more data objects in square brackets, which might be of different types. Individual elements in a list can be added, edited, or deleted since they are modifiable.

Set: Curly brackets encompass an unordered group of unique objects.

Frozen set: They're similar to sets, but they're immutable, meaning we can't change their values after they've been created.

Dictionary: A dictionary is an unordered object in which each item has a key and we may retrieve each value using that key. Curly brackets surround a collection of similar pairs.

49. In Python, what exactly is docstring?

The string literals encased in triple quotes that come right after the definition of a function, method, class, or module are called Python docstrings. The functionality of a function, method, class, or module is typically described using these terms. Using the __doc__ attribute, we may retrieve these docstrings.

50. In Python, how do you reverse a string?

There are no built-in functions in Python to let us reverse a string. For this, we'll need to use an array slicing operation.

51. How do I find out the Python version in CMD?

Press CMD + Space to see the Python version in CMD. This activates Spotlight. Type "terminal" into this box and hit Enter. Type python –version or python -V and press enter to run the program. The python version will be returned in the line following the command.

52. When it comes to identifiers, is Python case sensitive?

Yes. When it comes to identifiers, Python is case-sensitive. It's a case-by-case language. As a result, variable and Variable are not synonymous.

Python Interview Questions for Experienced

53. How can I use values from existing columns to build a new column in Pandas?

On a pandas data frame, we can conduct column-based mathematical operations. Operators can be used on Pandas columns that contain numeric values.

54. What are the many functions that grouby in pandas can perform?

Multiple aggregate functions can be utilised with grouby() in pandas. sum(), mean(), count(), and standard are a few examples().

Data is separated into groups based on categories, and the data in these individual groups can then be aggregated using the functions listed above.

55. In Pandas, how do you choose columns and add them to a new data frame? What if two columns with the same name exist?

If df is a pandas data frame, df.columns return a list of all columns. We may then select columns to create new columns.

If two columns have the same name, both of them are copied to the new data frame.

56. How to delete a column or group of columns in pandas?

drop() function can be used to delete the columns from a data frame.

57. Given the following data frame drop rows having column values as A.

	Col1	Col2
0	1	A
1	2	B
2	3	C

Code: d={"col1":[1,2,3],"col2":["A","B","C"]}   df=pd.DataFrame(d) df.dropna(inplace=True) df=df[df.col1!=1] df

Output:

	Col1	Col2
1	2	B
2	3	C

58. What is reindexing in pandas?

Reindexing is the process of re-assigning the index of a pandas data frame.

59. What exactly do you mean when you say "lambda function"?

Create a lambda function that prints the total of all the elements in this list -> [5, 8, 10, 20, 50, 100].

A lambda function is an anonymous function (a function that does not have a name) in Python. To define anonymous functions, we use the 'lambda' keyword instead of the 'def' keyword, hence the name 'lambda function'. Lambda functions can have any number of arguments but only one statement.

<code>from functools import reduce sequences = [5, 8, 10, 20, 50, 100] sum = reduce

(lambda x, y: x+y, sequences) print(sum)</code>

60. What is vstack() in numpy? Give an example

vstack() is a function to align rows vertically. All rows must have the same number of elements.

61. How do we interpret Python?

When a python program is written, it converts the source code written by the developer into an intermediate language, which is then converted into machine language that needs to be executed.

62. How to remove spaces from a string in Python?

Spaces can be removed from a string in python by using strip() or replace() functions. Strip() function is used to remove the leading and trailing white spaces while the replace() function is used to remove all the white spaces in the string.

63. Explain the file processing modes that Python supports.

There are three file processing modes in Python: read-only(r), write-only(w), read-write(rw) and append (a). So, if you are opening a text file in say, read mode. The preceding modes become "rt" for read-only, "wt" for write, and so on. Similarly, a binary file can be opened by specifying "b" along with the file accessing flags ("r", "w", "rw", and "a") preceding it.

64. What are pickling and unpickling?

Pickling is the process of converting a Python object hierarchy into a byte stream for storing it into a database. It is also known as serialization. Unpickling is the reverse of pickling. The byte stream is converted back into an object hierarchy.

65. How is memory managed in Python?

Memory management in python comprises a private heap containing all objects and data structure. The heap is managed by the interpreter and the programmer does not have access to it at all. The Python memory manager does all the memory allocation. Moreover, there is an inbuilt garbage collector that recycles and frees memory for the heap space.

66. What is a unit test in Python?

Unit test is a unit testing framework in Python. It supports sharing of setup and shutdown code for tests, aggregation of tests into collections, test automation, and independence of the tests from the reporting framework.

67. How do you delete a file in Python?

Files can be deleted in Python by using the command os.remove (filename) or os.unlink(filename)

68. How do you create an empty class in Python?

To create an empty class we can use the pass command after the definition of the class object. A pass is a statement in Python that does nothing.

69. What are Python decorators?

Decorators are functions that take another function as an argument to modify its behavior without changing the function itself. These are useful when we want to dynamically increase the functionality of a function without changing it.

Python Interview Questions for Advanced Levels

70. You have this covid-19 dataset below:

From this dataset, how will you make a bar-plot for the top 5 states having maximum confirmed cases as of 17=07-2020?

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
0	1	2020-01-30	6:00 PM	Kerala	1	0
1	2	2020-01-31	6:00 PM	Kerala	1	0
2	3	2020-02-01	6:00 PM	Kerala	2	0
3	4	2020-02-02	6:00 PM	Kerala	3	0
4	5	2020-02-03	6:00 PM	Kerala	3	0

sol: #keeping only required columns df = df[['Date', 'State/UnionTerritory','Cured','Deaths','Confirmed']] #renaming column names df.columns = ['date', 'state','cured','deaths','confirmed'] #current date today = df[df.date == '2020-07-17'] #Sorting data w.r.t number of confirmed cases max_confirmed_cases=today.sort_values(by="confirmed",ascending=False) max_confirmed_cases #Getting states with maximum number of confirmed cases top_states_confirmed=max_confirmed_cases[0:5] #Making bar-plot for states with top confirmed cases sns.set(rc={'figure.figsize':(15,10)}) sns.barplot(x="state",y="confirmed",data=top_states_confirmed,hue="state") plt.show()

71. From this covid-19 dataset:

How can you make a bar plot for the top-5 states with the most amount of deaths?

	date	state	cured	deaths	confirmed
4210	2020-07-17	Tripura	1604	3	2283
4211	2020-07-17	Uttarakhand	2995	50	3982
4212	2020-07-17	Uttar Pradesh	26675	1046	43441
4213	2020-07-17	West Bengal	21415	1023	36117
4214	2020-07-17	Cases being reassigned to states	0	0	531

Sol: max_death_cases=today.sort_values(by="deaths",ascending=False) max_death_cases sns.set(rc={'figure.figsize':(15,10)}) sns.barplot(x="state",y="deaths",data=top_states_death,hue="state") plt.show()

72. In Python, what is "self"?

Self is a class instance or an object. In Python, this is explicitly supplied as the first parameter. In Java, on the other hand, it is optional. With local variables, it makes it easier to distinguish between a class's methods and attributes.

In the init method, the self variable refers to the newly created object, whereas it relates to the object whose method was called in other methods.

73. What is the difference between the methods append() and extend()?

The methods append() and extend() are used to add elements to the end of a list.

append(element): Adds the given element at the end of the list that called this append() method

extend(another-list): Adds the elements of another list at the end of the list that called this extend() method

74. How does Python Flask handle database requests?

Flask supports a database-powered application (RDBS). Such a system requires creating a schema, which needs piping the schema.sql file into the sqlite3 command. Python developers need to install the sqlite3 command to create or initiate the database in Flask.

Flask allows to request for a database in three ways:

- before_request(): They are called before a request and pass no arguments.

- after_request(): They are called after a request and pass the response that will be sent to the client.

- teardown_request(): They are called in a situation when an exception is raised and responses are not guaranteed. They are called after the response has been constructed. They are not allowed to modify the request, and their values are ignored.

75. What is docstring in Python?

Python lets users include a description (or quick notes) for their methods using documentation strings or docstrings. Docstrings are different from regular comments in Python as, rather than being completely ignored by the Python Interpreter like in the case of comments, these are defined within triple quotes.

76. How is Multithreading achieved in Python?

Python has a multi-threading package, but commonly not considered good practice to use it as it will result in increased code execution time.

- Python has a constructor called the Global Interpreter Lock (GIL). The GIL ensures that only one of your 'threads' can execute at one time. The process makes sure that a thread acquires the GIL, does a little work, then passes the GIL onto the next thread.

- This happens at a very Quick instance of time and that's why to the human eye it seems like your threads are executing parallelly, but in reality, they are executing one by one by just taking turns using the same CPU core.

77. What is slicing in Python?

Slicing is a process used to select a range of elements from sequence data types like list, string, and tuple. Slicing is beneficial and easy to extract out the elements. It requires a : (colon) which separates the start index and end index of the field. All the data sequence types List or tuple allows us to use slicing to get the needed elements. Although we can get elements by specifying an index, we get only a single element whereas using slicing we can get a group or appropriate range of needed elements.

78. What is functional programming? Does Python follow a functional programming style? If yes, list a few methods to implement functionally oriented programming in Python.

Functional programming is a coding style where the main source of logic in a program comes from functions.

Incorporating functional programming in our codes means writing pure functions.

Pure functions are functions that cause little or no changes outside the scope of the function. These changes are referred to as side effects. To reduce side effects, pure functions are used, which makes the code easy to follow, test, or debug.

79. Which one of the following is not the correct syntax for creating a set in Python?

1. set([[1,2],[3,4],[4,5]])

2. set([1,2,2,3,4,5])

3. {1,2,3,4}

4. set((1,2,3,4))

set([[1,2],[3,4],[4,5]])

Explanation: The argument given for the set must be iterable.

80. What is the difference between / and // operator in Python?

- /: is a division operator and returns the Quotient value.

10/3

3.33

- //: is known as floor division operator and used to return only the value of quotient before the decimal

10//3

3

81. How to combine dataframes in pandas?

The different data frames can be easily combined with the help of functions listed below:

- Append():

This function is used for the horizontal stacking of data frames.

- concat(): This function is used for vertical stacking and best suites when the data frames to be combined possess the same column and similar fields.

- join(): This function is used to extract data from different data frames which have one or more columns common.

82. What is regression?

Regression is termed as supervised machine learning algorithm technique which is used to find the correlation between variables and help to predict the dependent variable(y) based upon the independent variable (x). It is mainly used for prediction, time series modeling, forecasting, and determining the causal-effect relationship between variables.

Scikit library is used in python to implement the regression and all machine learning algorithms.

There are two different types of regression algorithms in machine learning :

Linear Regression: Used when the variables are continuous and numeric in nature.

Logistic Regression: Used when the variables are continuous and categorical in nature.

83. What is classification?

Classification refers to a predictive modeling process where a class label is predicted for a given example of input data. It helps categorize the provided input into a label that other observations with similar features have. For example, it can be used for classifying a mail whether it is spam or not, or for checking whether users will churn or not based on their behavior.

These are some of the classification algorithms used in Machine Learning:

- Decision tree

- Random forest classifier

- Support vector machine

84. What exactly is SVM?

The support vector machine (SVM) is a supervised machine learning model for two-group classification issues that takes into account classification algorithms.

The training data is represented as points in space that are sorted into groups with the help of a distinct gap that should be as large as possible.

85. What is the easiest way to calculate percentiles when using Python?

The easiest and the most efficient way you can calculate percentiles in Python is to make use of NumPy arrays and its functions.

86. What is a palindrome number?

A palindrome is a word, phrase, or sequence that reads the same forward as it does backward, such as madam, nurses run, and so on.

87. What is slicing in python?

Slicing is used to access parts of sequences like lists, tuples, and strings. The syntax of slicing is -[start:end:step]. The step can be omitted as well. When we write [start:end] this returns all the elements of the sequence from the start (inclusive) till the end-1

element. If the start or end element is negative i, it means the ith element from the end. The step indicates the jump or how many elements have to be skipped. Eg. if there is a list- [1,2,3,4,5,6,7,8]. Then [-1:2:2] will return elements starting from the last element till the third element by printing every second element.i.e. [8,6,4].

88. What are Keywords in Python?

Keywords in python are reserved words that have special meanings. They are generally used to define types of variables. Keywords cannot be used for variable or function names. There are the following 33 keywords in python -

- And
- Or
- Not
- If
- Elif
- Else
- For
- While
- Break
- As
- Def
- Lambda
- Pass
- Return
- True
- False
- Try
- With
- Assert

- Class

- Continue

- Del

- Except

- Finally

- From

- Global

- Import

- In

- Is

- None

- Nonlocal

- Raise

- Yield

89. How to combine dataframes in pandas?

The data frames in python can be combined in the following ways-

1. Concatenating them by stacking the 2 data frames vertically.

2. Concatenating them by stacking the 2 data frames horizontally.

3. Combining them on a common column. This is referred to as joining.

The concat() function is used to concatenate two dataframes. Its syntax is-
pd.concat([dataframe1, dataframe2]).

Dataframes are joined together on a common column called a key. When we combine all the rows in data frame it is union and the join used is outer join. While, when we combine the common rows or intersection, the join used is the inner join. Its syntax is-
pd.concat([dataframe1, dataframe2], axis='axis', join='type_of_join)

90. What are the new features added in Python 3.9.0.0 version?

The new features in Python 3.9.0.0 version are-

- New Dictionary functions Merge(|) and Update(|=)

- New String Methods to Remove Prefixes and Suffixes

- Type Hinting Generics in Standard Collections

- New Parser based on PEG rather than LL1

- New modules like zoneinfo and graphlib

- Improved Modules like ast, asyncio, etc.

- Optimizations such as optimized idiom for assignment, signal handling, optimized python built ins, etc.

- Deprecated functions and commands such as deprecated parser and symbol modules, deprecated functions, etc.

- Removal of erroneous methods, functions, etc.

91. How is memory managed in Python?

Memory is managed in Python in the following ways:

Memory management in python is managed by Python private heap space. All Python objects and data structures are located in a private heap. The programmer does not have access to this private heap. The python interpreter takes care of this instead.

The allocation of heap space for Python objects is done by Python's memory manager. The core API gives access to some tools for the programmer to code.

Python also has an inbuilt garbage collector, which recycles all the unused memory and so that it can be made available to the heap space.

92. What is namespace in Python?

A namespace is a naming system used to make sure that names are unique to avoid naming conflicts.

93. What is PYTHONPATH?

It is an environment variable that is used when a module is imported. Whenever a module is imported, PYTHONPATH is also looked up to check for the presence of the imported modules in various directories. The interpreter uses it to determine which module to load.

94. What are python modules? Name some commonly used built-in modules in Python?

Python modules are files containing Python code. This code can either be functions classes or variables. A Python module is a .py file containing executable code.

Some of the commonly used built-in modules are:

- os

- sys

- math

- random

- data time

- JSON

95. Is Python case sensitive?

Yes, Python is case-sensitive.

96. How to remove values to a python array?

Elements can be removed from the python array using pop() or remove() methods.

pop(): This function will return the removed element.

remove(): It will not return the removed element.

97. What are Python libraries? Name a few of them.

Python libraries are a collection of Python packages. Some of the majorly used python libraries are – Numpy, Pandas, Matplotlib, Scikit-learn, and many more.
98. How do you do data abstraction in Python?

Data Abstraction is providing only the required details and hiding the implementation from the world. It can be achieved in Python by using interfaces and abstract classes.

99. What does an object() do?

It returns a featureless object that is a base for all classes. Also, it does not take any parameters.

100. Explain what Flask is and its benefits?

Flask is a Python web microframework based on the BSD licence "Werkzeug, Jinja2, and good intentions." Two of its dependencies are Werkzeug and Jinja2. This means it will have few if any, external library requirements. It lightens the framework while reducing update reliance and reducing security flaws.

A session is just a way of remembering information from one request to the next. A session in a flask employs a signed cookie to allow the user to inspect and edit the contents of the session. If the user only has the secret key, he or she can change the session. Flask.secret key.

101. Mention the differences between Django, Pyramid, and Flask.

Flask is a "microframework" designed for small applications with straightforward needs. External libraries are required in the flask. The flask is now ready for use.

Pyramid is designed for larger projects. It gives the developer flexibility and allows them to use the appropriate tools for their project. The database, URL structure, templating style, and other options are all available to the developer. Pyramid has a lot of configuration options.

Django, like Pyramid, may be used for larger applications. It has an ORM in it.