iNeuron

Python

Interview Questions

Q1. What are Decorators in Python?

Ans- Decorator is a very useful tool in Python that is used by programmers to alter the changes in the behaviour of classes and functions.

Q2. What is a Python PATH?

Ans- This is an environment variable used to import a variable and check for the presence of variables present in different directories.

Q3. Create a module in Python.

Ans- Creating a module in Python is fairly simple. First, open a text editor and create a new file. Add the code you want to include in the module. You can include various functions and classes, as well as global variables.
Save the file with a .py extension (e.g. myModule.py).
Import the module using the import statement.
Use the module's functions and classes in your program.
Q4. How memory can be managed in Python?

Ans- In Python, the memory is managed using the Python Memory Manager. The manager allocates memory in the form of a private heap space dedicated to Python. All objects are now stored in this Hype and due to its private feature, it is restricted from the programmer.

Q5. What do you mean by Python literals?

A literal is a simple and direct form of expressing a value. Literals reflect the primitive type options available in that language. Integers, floating-point numbers, Booleans, and character strings are some of the most common forms of literal. Python supports the following literals:

Literals in Python relate to the data that is kept in a variable or constant. There are several types of literals present in Python

String Literals: It's a sequence of characters wrapped in a set of codes. Depending on the number of quotations used, there can be single, double, or triple strings. Single characters enclosed by single or double quotations are known as character literals.

Numeric Literals: These are unchangeable numbers that may be divided into three types: integer, float, and complex.

Boolean Literals: True or False, which signify '1' and '0,' respectively, can be assigned to them.

Special Literals: It's used to categorize fields that have not been generated. 'None' is the value that is used to represent it.

- String literals: "halo" , '12345'
- Int literals: 0,1,2,-1,-2
- Long literals: 89675L
- Float literals: 3.14
- Complex literals: 12j
- Boolean literals: True or False
- Special literals: None

- Unicode literals: u”hello”
- List literals: [], [5, 6, 7]
- Tuple literals: (), (9,), (8, 9, 0)
- Dict literals: {}, {‘x’:1}
- Set literals: {8, 9, 10}

Q6. What is pep 8?
PEP 8, often known as PEP8 or PEP-8, is a document that outlines best practices and recommendations for writing Python code. It was written in 2001 by Guido van Rossum, Barry Warsaw, and Nick Coghlan. The main goal of PEP 8 is to make Python code more readable and consistent.

Python Enhancement Proposal (PEP) is an acronym for Python Enhancement Proposal, and there are numerous of them. A Python Enhancement Proposal (PEP) is a document that explains new features suggested for Python and details elements of Python for the community, such as design and style.

Q7. What are global, protected, and private attributes in Python?

The attributes of a class are also called variables. There are three access modifiers in Python for variables, namely

a. public – The variables declared as public are accessible everywhere, inside or outside the class.

b. private – The variables declared as private are accessible only within the current class.

c. protected – The variables declared as protected are accessible only within the current package.

Attributes are also classified as:

– Local attributes are defined within a code-block/method and can be accessed only within that code-block/method.

– Global attributes are defined outside the code-block/method and can be accessible everywhere.

Q8. What are Keywords in Python?

Keywords in Python are reserved words that are used as identifiers, function names, or variable names. They help define the structure and syntax of the language.

Q9. How can you concatenate two tuples?

Let's say we have two tuples like this ->

tup1 = (1, "a", True)

tup2 = (4,5,6)

Concatenation of tuples means that we are adding the elements of one tuple at the end of another tuple.

Q10. What are functions in Python?

Ans: Functions in Python refer to blocks that have organized, and reusable codes to perform single, and related events. Functions are important to create better modularity for applications that reuse a high degree of coding. Python has a number of built-in functions like print(). However, it also allows you to create user-defined functions.

Q11. What are Pandas?

Pandas is an open-source python library that has a very rich set of data structures for data-based operations. Pandas with their cool features fit in every role of data operation, whether it be academics or solving complex business problems. Pandas can deal with a large variety of files and are one of the most important tools to have a grip on.

Q12. How can you randomize the items of a list in place in Python?

Ans-

```
In [26]: from random import shuffle
         x = ['Keep', 'The', 'Blue', 'Flag', 'Flying', 'High']
         shuffle(x)
         print(x)

         ['Blue', 'Flag', 'The', 'High', 'Keep', 'Flying']

In [ ]:

In [ ]:
```

Q13. How can you generate random numbers in Python?

Ans: Random module is the standard module that is used to generate a random number. The method is defined as:

The statement random.random() method return the floating-point number that is in the range of [0, 1). The function generates random float numbers. The methods that are used with the random class are the bound methods of the hidden instances. The instances of the Random can be done to show the multi-threading programs that creates a different instance of individual threads. The other random generators that are used in this are:

1. randrange (a, b): it chooses an integer and define the range in-between [a, b). It returns the elements by selecting it randomly from the range that is specified. It doesn't build a range object.
2. Uniform (a, b): it chooses a floating point number that is defined in the range of [a,b). Iyt returns the floating point number
3. Normalvariate (mean, sdev): it is used for the normal distribution where the mu is a mean and the sdev is a sigma that is used for standard deviation.
4. The Random class that is used and instantiated creates independent multiple random number generators.

Q14. What is the difference between range & xrange?

Ans**:** For the most part, xrange and range are the exact same in terms of functionality. They both provide a way to generate a list of integers for you to use, however you please. The only difference is that range returns a Python list object and x range returns an xrange object.

This means that xrange doesn't actually generate a static list at run-time like range does. It creates the values as you need them with a

special technique called yielding. This technique is used with a type of object known as generators. That means that if you have a really gigantic range, you'd like to generate a list for, say one billion, xrange is the function to use.

Q15. What is pickling and unpickling?

Ans: Pickle module accepts any Python object and converts it into a string representation and dumps it into a file by using dump function, this process is called pickling. While the process of retrieving original Python objects from the stored string representation is called unpickling.

Q16. What are the generators in python?

Ans: Functions that return an iterable set of items are called generators.

Q17. How will you capitalize the first letter of string?

Ans: In Python, the capitalize () method capitalizes the first letter of a string. If the string already consists of a capital letter at the beginning, then, it returns the original string.

Q18. How will you convert a string to all lowercase?

Ans: To convert a string to lowercase, lower () function can be used.

Q19. How to comment multiple lines in python?

Ans: Multi-line comments appear in more than one line. All the lines to be commented are to be prefixed by a #. You can also a very

good shortcut method to comment multiple lines. All you need to do is hold the ctrl key and left click in every place wherever you want to include a # character and type a # just once. This will comment all the lines where you introduced your cursor.

Q20. What is the purpose of 'is', 'not' and 'in' operators?

Ans: Operators are special functions. They take one or more values and produce a corresponding result.

is: returns true when 2 operands are true (Example: "a" is 'a')

not: returns the inverse of the Boolean value

in: checks if some element is present in some sequence