1) Who developed Python Programming Language?

Guido van Rossum

Python was created by Guido van Rossum, and first released on February 20, 1991. While you may know the python as a large snake, the name of the Python programming language comes from an old BBC television comedy sketch series called Monty Python's Flying Circus.

2) Which type of Programming does Python support?

Python is an interpreted programming language, supporting object-oriented, structured, and functional programming.

3) Is Python case sensitive when dealing with identifiers?

Yes, Python is a case-sensitive language, i.e., it treats uppercase and lowercase characters differently. This applies to identifiers too. We must avoid using the same name with different cases while naming identifiers.

4) What is the correct extension of the Python file?

.py extension

5) Is Python code compiled or interpreted?

Python is an interpreted language, which means the source code of a Python program is converted into bytecode that is then executed by the Python virtual machine.

6) Name a few blocks of code used to define in Python language?

Indentation is used to define a block of code in python. In Python, indentation is done with whitespace. All statements with the same right-hand distance belong to the same code block. If a block needs to be more nested, it is indented to the right.

7) State a character used to give single-line comments in Python ?

We can write a single-line comment by adding a single # character before any statement or line of code.

In [1]:
```
# This is a single line comment
```

8) Mention functions which can help us to find the version of python that we are currently working on ?

The function sys.version can help us to find the version of python that we are currently working on. It also contains information on the build number and compiler used. For example, 3.5.2, 2.7.3 etc. this function also returns the current date, time, bits etc along with the version.

9) Python supports the creations of anonymous functions at runtime, using a construct called

lambda

the lambda keyword is used to define an anonymous function in Python..

10) What does pip stand for python?

pip stands for "preferred installer program". Python 2.7. 9 and later (on the python2 series), and Python 3.4 and later include pip (pip3 for Python 3) by default.

11) Mention a few built-in functions in python?

abs() Returns the absolute value of a number

all() Returns True if all items in an iterable object are true

any() Returns True if any item in an iterable object is true

ascii() Returns a readable version of an object. Replaces none-ascii characters with escape character

bin() Returns the binary version of a number

bool() Returns the boolean value of the specified object

bytearray() Returns an array of bytes

bytes() Returns a bytes object

callable() Returns True if the specified object is callable, otherwise False

chr() Returns a character from the specified Unicode code.

classmethod() Converts a method into a class method

compile() Returns the specified source as an object, ready to be executed

complex() Returns a complex number

delattr() Deletes the specified attribute (property or method) from the specified object

dict() Returns a dictionary (Array)

dir() Returns a list of the specified object's properties and methods

divmod() Returns the quotient and the remainder when argument1 is divided by argument2

enumerate() Takes a collection (e.g. a tuple) and returns it as an enumerate object

eval() Evaluates and executes an expression

exec() Executes the specified code (or object)

filter() Use a filter function to exclude items in an iterable object

float() Returns a floating point number

format() Formats a specified value

frozenset() Returns a frozenset object

getattr() Returns the value of the specified attribute (property or method)

globals() Returns the current global symbol table as a dictionary

hasattr() Returns True if the specified object has the specified attribute (property/method)

hash() Returns the hash value of a specified object

help() Executes the built-in help system

hex() Converts a number into a hexadecimal value

id() Returns the id of an object

input() Allowing user input

int() Returns an integer number

isinstance() Returns True if a specified object is an instance of a specified object

issubclass() Returns True if a specified class is a subclass of a specified object

iter() Returns an iterator object

len() Returns the length of an object

list() Returns a list

locals() Returns an updated dictionary of the current local symbol table

map() Returns the specified iterator with the specified function applied to each item

max() Returns the largest item in an iterable

memoryview() Returns a memory view object

min() Returns the smallest item in an iterable

next() Returns the next item in an iterable

object() Returns a new object

oct() Converts a number into an octal

open() Opens a file and returns a file object

ord() Convert an integer representing the Unicode of the specified character

pow() Returns the value of x to the power of y

print() Prints to the standard output device

property() Gets, sets, deletes a property

range() Returns a sequence of numbers, starting from 0 and increments by 1 (by default)

repr() Returns a readable version of an object

reversed() Returns a reversed iterator

round() Rounds a numbers

set() Returns a new set object

setattr() Sets an attribute (property/method) of an object

slice() Returns a slice object

sorted() Returns a sorted list

staticmethod() Converts a method into a static method

str() Returns a string object

sum() Sums the items of an iterator

super() Returns an object that represents the parent class

tuple() Returns a tuple

type() Returns the type of an object

vars() Returns the **dict** property of an object

zip() Returns an iterator, from two or more iterators

12) What is the maximum possible length of an identifier in Python?

An identifier can have a maximum length of 79 characters in Python.

13) What are the benefits of using python?

1. Presence of third-party modules
2. Extensive support libraries(NumPy for numerical
3. calculations, Pandas for data analytics, etc.)
4. Open source and large active community base
5. Versatile, Easy to read, learn and write
6. User-friendly data structures
7. High-level language
8. Interpreted Language
9. Dynamically typed language(No need to mention data type based on the value assigned, it takes data type)
10. Object-Oriented and Procedural Programming language
11. Portable and Interactive
12. Ideal for prototypes – provide more functionality with less coding
13. Highly Efficient(Python’s clean object-oriented design
14. provides enhanced process control, and the language is equipped with excellent text processing and integration capabilities, as well as its own unit testing 17framework, which makes it more efficient.)
15. Internet of Things(IoT) Opportunities
16. Portable across Operating systems

14) How is memory managed in python ?

Memory in Python is managed by Python private heap space. All Python objects and data structures are located in a private heap. This private heap is taken care of by Python Interpreter itself, and a programmer doesn't have access to this private heap.

15) How to install Python on Windows and set path variables?

The PATH variable is a list of directories where each directory contains the executable file for a command.

Following steps to install python in windows are :-

1. Right-clicking This PC and going to Properties.
2. Clicking on the Advanced system settings in the menu on the left.
3. Clicking on the Environment Variables button on the bottom right.
4. In the System variables section, selecting the Path variable and clicking on Edit. The next screen will show all the directories that are currently a part of the PATH variable.
5. Clicking on New and entering Python's install directory.

16) Is indentation required in Python ?

Indentation is mandatory in python to define the blocks of statements. It is preferred to use whitespaces instead of tabs to indent in python. Python uses four spaces as default indentation spaces.

In [ ]: