

1) What are the data types in Python? Explain

→ Numbers: Number data types store numeric values. Number objects are created when you assign a value to them.

ii) Strings: Strings in Python are identified as a contiguous set of characters represented in the quotation marks. Python allows either pairs of single or double quotes.

iii) Lists: Lists are the most versatile of Python's compound data types. A list contains items separated by commas and enclosed within square brackets (`[]`).

iv) Tuples: A tuple is another sequence data type that is similar to the list. A tuple consists of a number of values separated by commas. Unlike lists, however, tuples are enclosed within parentheses.

v) Dictionary: Python's dictionaries are kind of hash-table type. They work

2) Briefly explain the history of Python?

→ In the late 1980s, history was about to be written. It was that time when working on Python started. Soon after that, Guido van Rossum began doing its application based work in December of 1989 by at Centrum Wiskunde & Informatica (CWI) which is situated in Netherlands. It was started firstly as a hobby project because he was looking for an interesting project to keep him occupied during Christmas.

The programming language which Python is said to have succeeded is ABC programming language, which had the interfacing with Amoeba operating system and had the feature of exception handling.

The inspiration for the name came from BBC's TV show - 'Monty Python's Flying Circus', as he was a big of TV show and also he wanted a short, unique and slightly mysterious life' (BDFL) until he stepped down from the position as the leader on 12th July 2018.

When it was released, it used a lot fewer codes to express the concepts, when we compare it with Java, C++ & C. Its design philosophy was quite good too. Its main objective is to provide code readability and advanced developer productivity.

3) Explain all the operators in Python?

→ Operators are special symbols that represent computations like addition and multiplication. The values the operator is applied to are called operands.

The operators $+$, $-$, $*$, $/$, and $**$ perform addition, subtraction, multiplication, division and exponentiation, as in the following examples:

$20 + 32$

$hour - 1$

$hour * 60 + minute$

$minute / 60$

$5 ** 2$

$(5 + 9) * (15 - 7)$

4) Explain the features of python

- simple
- Easy to Learn
- Free and open source
- High-level Language
- Python is a Beginner's Language
- Portable
- Interactive
- Interpreted
- Object oriented
- Extensible
- Embeddable
- Databases
- GUI programming
- Scalable.

5) Justify why Python is interactive interpreted language.

→ Python is an interpreted object-oriented programming language. By Interpreted it is meant that each time a program is run the interpreter checks through the code for errors and then interprets the instructions into machine-readable bytecode.