

Python →

Python is an interpreted, object oriented, high-level programming language with dynamic semantic.

→ it's a high-level built-in data-structure.

→ Python is simple and easy to learn.

Characteristics

- ⇒ Free and open source.
- ⇒ high level programming language.
- ⇒ Standard library.
- ⇒ Easy to code.
- ⇒ Dynamically typed
- ⇒ Portable.

Difference b/w Python 2 and Python 3

Python 2:

- ⇒ Released in year 2000
- ⇒ Print is considered to be a statement and not a function.
- ⇒ String are stored as ASCII by default.
- ⇒ in division of 2 integer value $7/2$ output is 3
- ⇒ global variables do change if they are used inside a for-loop.
- ⇒ Complicated syntax.

- Python 3 :
- ⇒ Released in year 2008.
 - ⇒ Print considered to be a function and not a statement.
 - ⇒ strings are stored as Unicode by default.
 - ⇒ in the division of 2 integers we get floating point value
ex $7/2$ output is 3.5
 - ⇒ The value of variables never changes.
 - ⇒ Python 3 has easier syntax compared to Python 2.

Call by value: →

In call by value method of parameter passing, the values of actual parameters are copied to the functions formal parameters.

- ⇒ So there are two copies of parameters stored in different memory location.
- ⇒ One is original copy and second is function copy.
- ⇒ Any changes made inside functions are not reflected in the actual parameters.

call by reference: →

In call by reference method of parameter passing, the address of actual parameters is passed to the function as the formal parameters.

⇒ Both the actual and formal parameters refer to the same locations.

⇒ Any changes made inside the function are actually reflected in the actual parameters of the caller.