* A programming Language is a vocabulary and set of grammatical rules for instructing a comp. or computing device to perform specific tasks.
* Python is easy as well as powerful language.
* Types

High Level Language -- close to human

Low level Language – close to machine

Language processor(acts as a translator) is used to convert HLL to LLL

X= 10

Y = 20 ------------------------------------🡪 source code

Z = X+Y

Print(Z)

**And Intermediator used to convert source code to Object code is known as language processor(Assembler, compiler, interpreter)**

100011001

100010101------------------------------🡪 Object Code

101110110

1 GL Machine Language

2 GL Assemble Language----------------------------🡪LLL

3 GL Procedural Language------------------------------🡪HLL

4 GL Non-Procedural Language

5 GL Language as like Natural Language Mercury.

Python is both scripting as well as Programming Language.

A scripting lang. is programming Language that is interpreted. These types of Languages are used in automation etc.

According to TIOBE (which stands for “The Importance of Being Earnest”)

Features:>

* **Simplicity-**🡪 simple is better than complex. This is one of the guiding principles behind design Philosophy of python.
* **Fee and open source**-🡪 free of cost and available for public then it is known as Open source.
* **Interpreter based**
* **Cross- platform**
* **Compact**-> more often than not, python code is smaller size as compared to equivalent code in C/C++/Java. This is mainly because of functional pgm. Features such as list comprehension, map and reduce functions etc.
* **Extensible**-> Standard distribution of python is bundled with several built-in modules having functions ranging from statistics, regex, socket handling, serialization etc.
* **Dynamically type**

**Where python is used?**

* Data science
* ML
* Image processing
* GUI interface
* Data based applications
* Embedded system and IOT
* Web applications

Company uses python--------🡪 **Google, FB, Instagram, Quora,Dropbox,Youtube.**

**Python versions:**

V1 was introduce in jan 1994

V2 in October in 2000

V3 in dec. 2008

Current version is 3.10.5

**Batteries:**

Boto🡪 amazon web services library

MySql – connector Python

**Flavour:**

Cpython

Jython

Ironpyhton

Pypy(python written on itself)

RubyPyhton

AnacondaPyhton

**Python coding Instructions:**

**>>> or …** (prompt)

**… continuation**