

## Python.

programming: is the process of writing instructions for a computer to perform specific tasks. The instructions are written in a programming language like Python, Java etc. that the computer can understand and execute.

### 3 levels of programming :

- 1) low level / binary programming
- 2) assembly level programming
- 3) high level programming.

Python: It is a high level, object oriented, interpreted, endent, dynamic programming language used for web development, data analysis, automation and more.

### Features :

- ) easy to learn
- ) simple and readable
- ) platform independent
- ) Free libraries / packages
- ) Simple syntax
- ) open source

### applications :

- |                       |                             |
|-----------------------|-----------------------------|
| •) web development    | •) Artificial Intelligence  |
| •) Game development   | •) Automation               |
| •) mobile development | •) Graphical user interface |
| •) Data science       | •) Internet of things       |

### pros of python:

- 1) Simple and readable syntax
- 2) Extensive libraries
- 3) works on all major operating systems.
- 4) Large global developer base
- 5) Rapid development.
- 6) Easily connects with other languages and tools.

## cons of python

1. slow execution speed as it is interpreted language
2. High memory usage
3. Rarely used for mobile apps
4. Runtime errors
5. Not ideal for low level programming.

Python was initially designed by Guido van Rossum in 1991 and developed by Python software Foundation. It was mainly developed for emphasis on code readability.

) Python evolved with major versions - Python 2 (2000) and Python 3 (2008) becoming one of the most popular languages.