- What is Programming &
⇒ A Programming is a set of inst
- ructions, rules, and symbols that allo
- w a human to communicate with a computer to perform task. It is used to write computer programs and software, telling the computer or sy -stem what to do, ho to do it, and how to process data.

- There are 3 level of programming
  ○ low level / binary programming.
  ○ Assembly level programming.
  ○ High level programming.

- Python

⇒ It is a high-level, interpreted, object oriented, indent, dynamic, programming language known for its readability and versatility.

- Features

  ○ Easy to learn

- Platform Independent / Portable
- Libraries / Packages
- Simple syntax
- Open source

- **Applications**

- Web development
- Mobile development
- desktop app development
- Gaming app development
- GUI (Graphical User Interface)
- IOT
- Data science / analytics
- AI

Pros and cons of python

- **Pros**
- Easy to learn and use.
- Extensive libraries (Numpy, Pandas).
- Rapid development. (write code quickly).
- Versatile.
- Large community.
- Cross - platform.

- ### Cons

- Slow execution speed.
- High memory consumption.
- Mobile development limitations.
- Runtime errors.
- Complex multithreading.

History of Python

The programming language Python was conceived in the late 1980s, and its implementation was started in December 1989 by Guido van Rossum at CWI in the Netherlands as a successor to ABC capable of exception handling and interfacing with the Amoeba operating system. Van Rossum was Python's principal author and had a central role in deciding the direction of Python (as reflected in the title given to him by the Python community).

Version	Latest micro version	Release date
0.9	0.9.9	1991-02-20
1.0	1.0.4	1994-01-26
1.1	1.1.1	1994-05-11
1.2		1995-04-13
1.3		1995-10-13
1.4		1996-10-25
1.5	1.5.2	1998-01-03
1.6	1.6.1	2000-09-05
2.0	2.0.1	2000-10-16
2.1	2.1.3	2001-04-15
2.2	2.2.3	2001-12-21
2.3	2.3.7	2003-06-29
2.4	2.4.6	2004-11-30
2.5	2.5.6	2006-09-19
2.6	2.6.9	2008-10-01
2.7	2.7.18	2010-07-03
3.0	3.0.1	2008-12-03
3.1	3.1.5	2009-06-27
3.2	3.2.6	2011-02-20
3.3	3.3.7	2012-09-29
3.4	3.4.10	2014-03-16
3.5	3.5.10	2015-09-13
3.6	3.6.15	2016-12-23

Version	Latest micro version	Release Date
3.7	3.7.17	2018-06-27
3.8	3.8.20	2019-10-14
3.9	3.9.24	2020-10-05
3.10	3.10.19	2021-10-04
3.11	3.11.14	2022-10-24
3.12	3.12.12	2023-10-02
3.13	3.13.9	2024-10-07
3.14	3.14.0	2025-10-07
3.15	3.15.0	2026-10-01