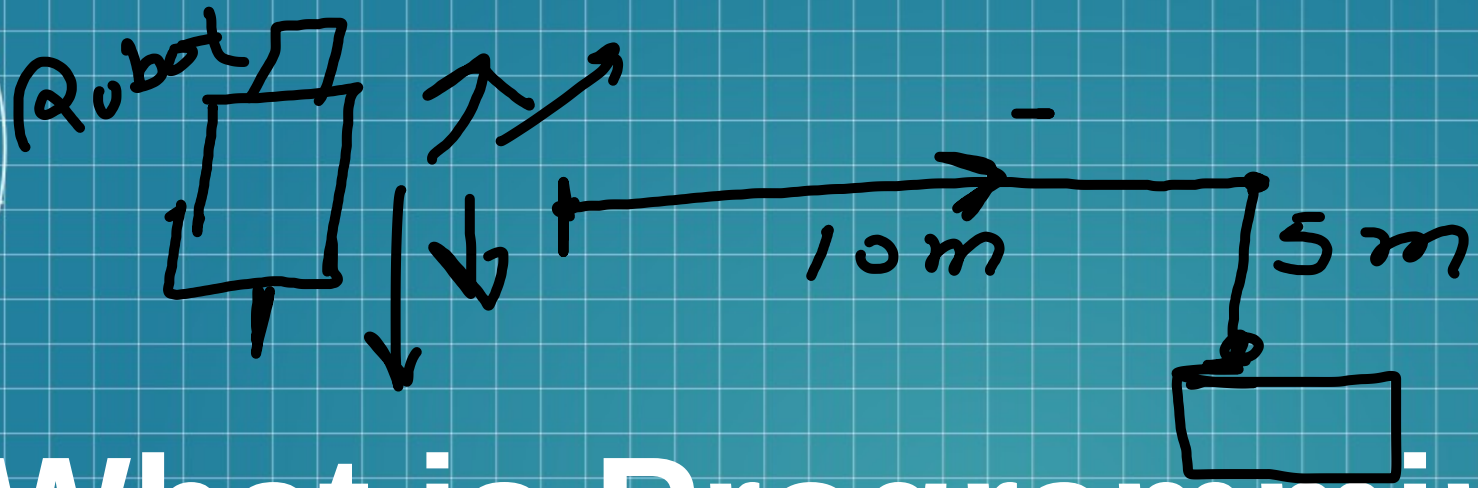
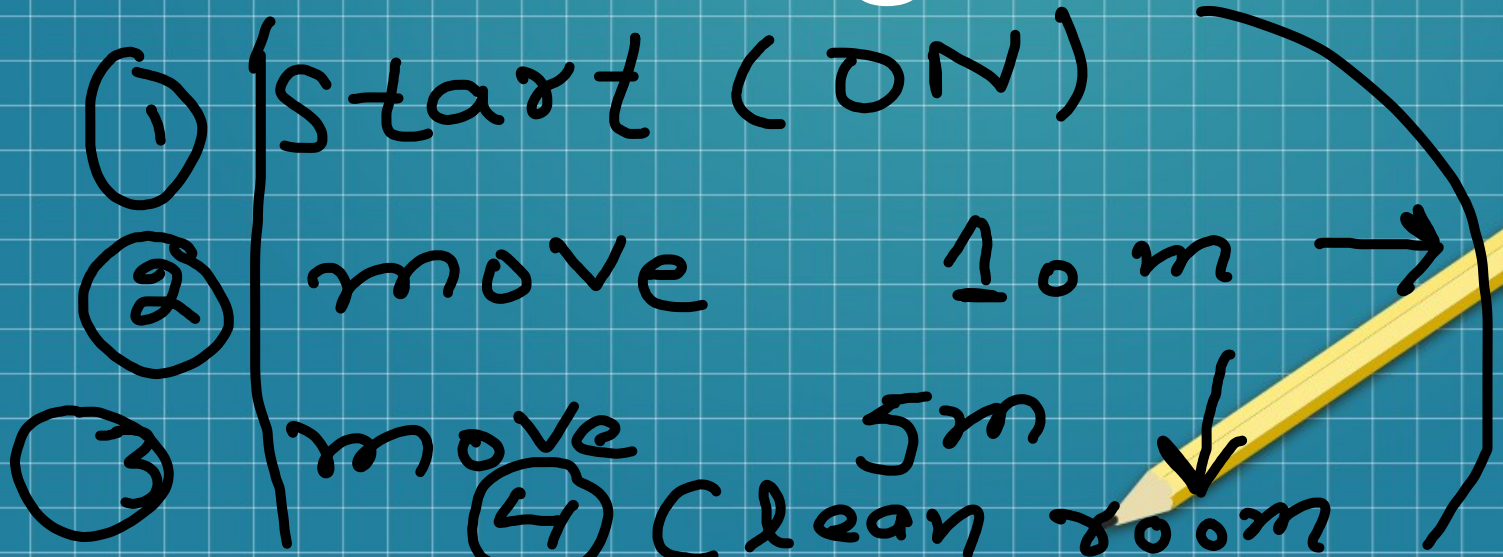
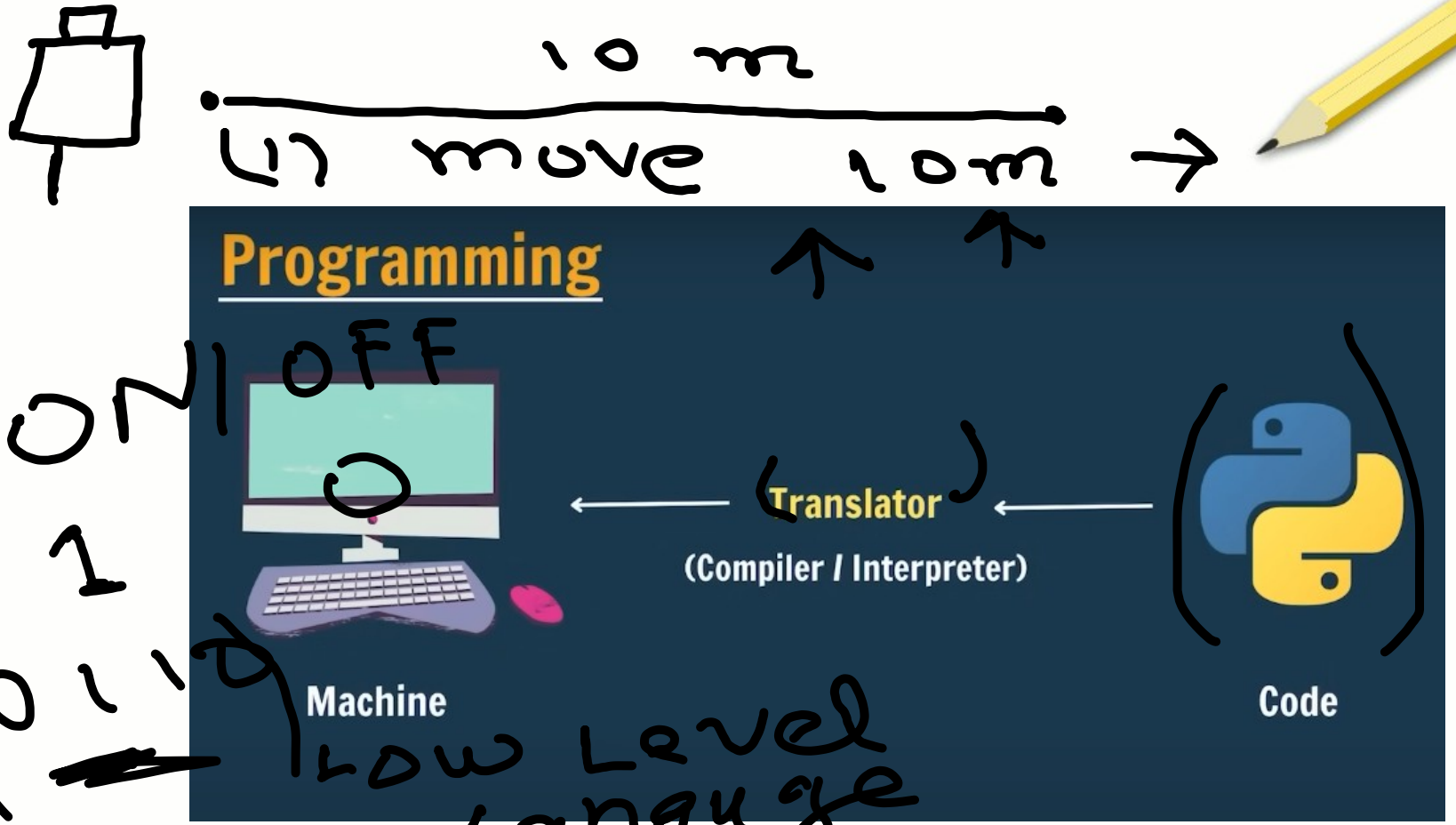


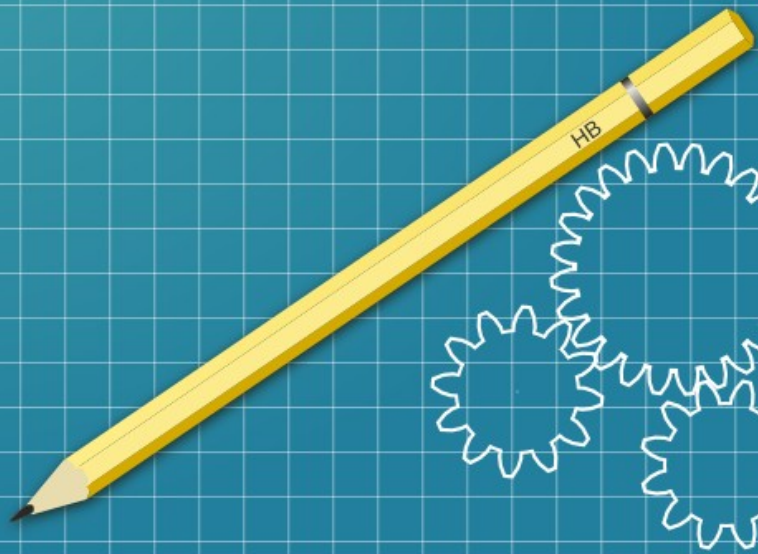
What is Programming?



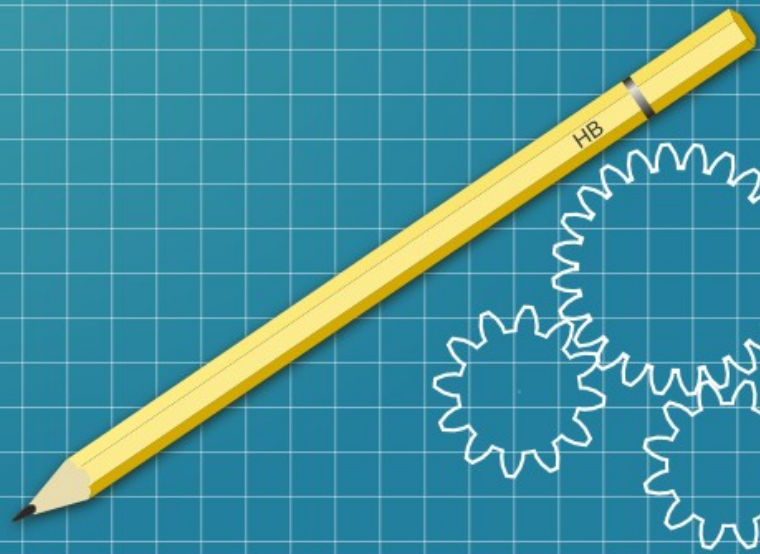

10 m
move 10m
Programming
ON OFF
1 0
Translator
(Compiler / Interpreter)
Machine
Code
Low Level Language

Programming is the process of writing instructions for a computer to perform specific tasks.

- Mobile Apps
- Websites
- Games
- Robots

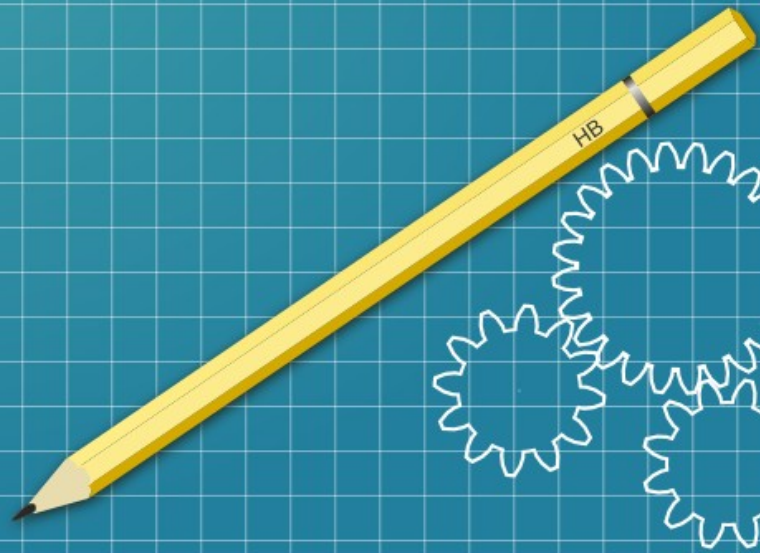


Why is Programming Important ?



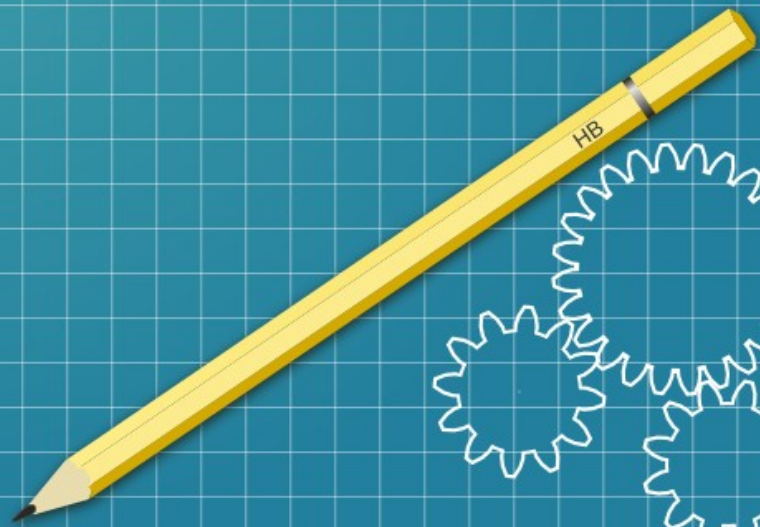
Automates repetitive tasks.

Solves real-world problems.

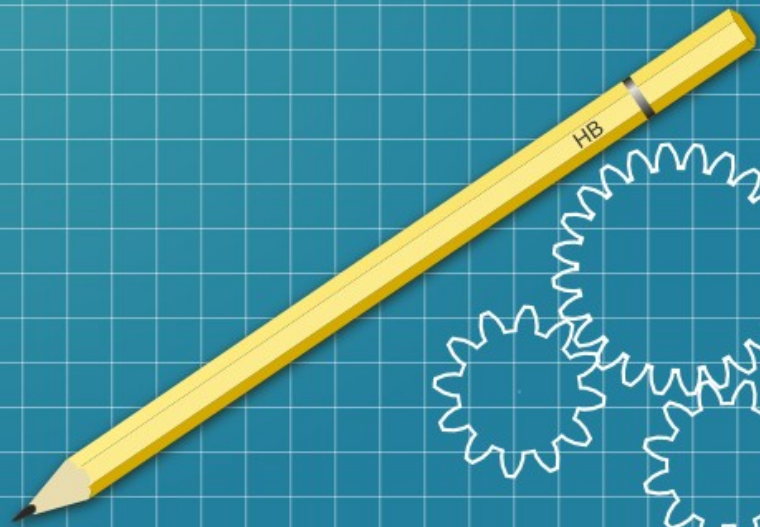


Used in fields like:

- Web Development
- Artificial Intelligence
- Game Development



Programming Languages

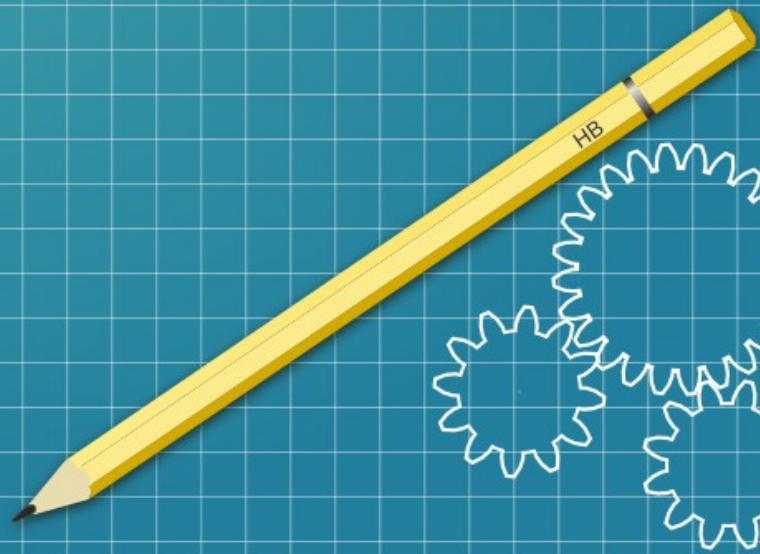


Python

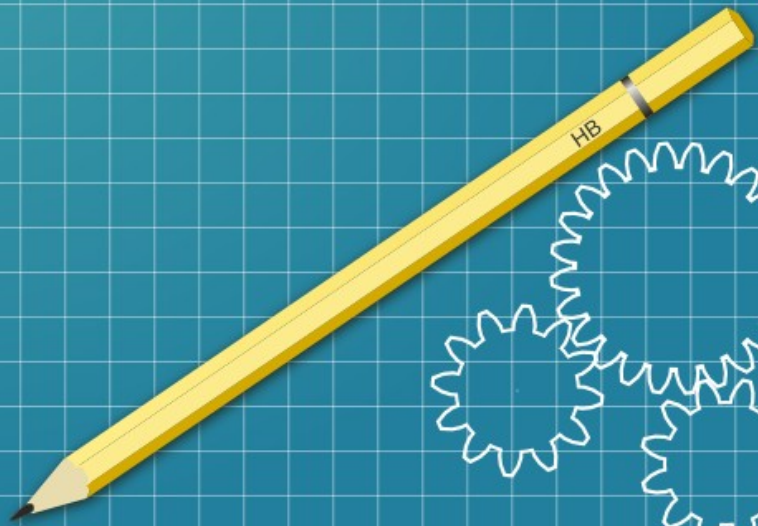
Java

C++

JavaScript

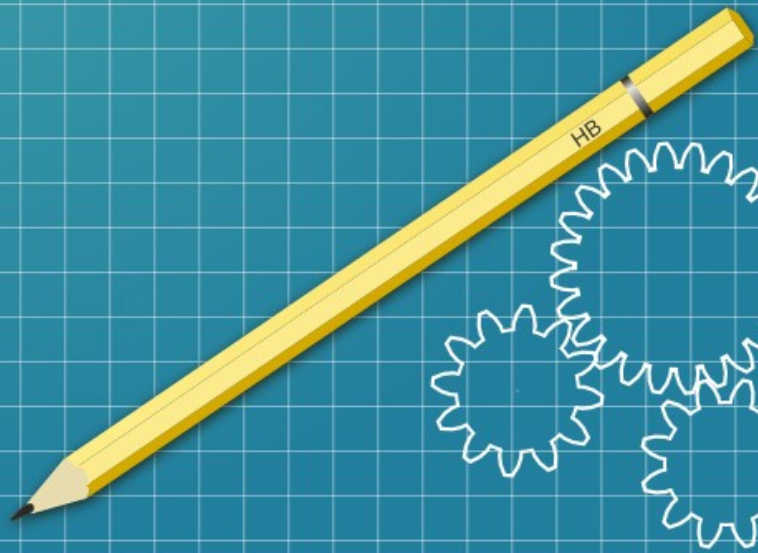


Why Python?

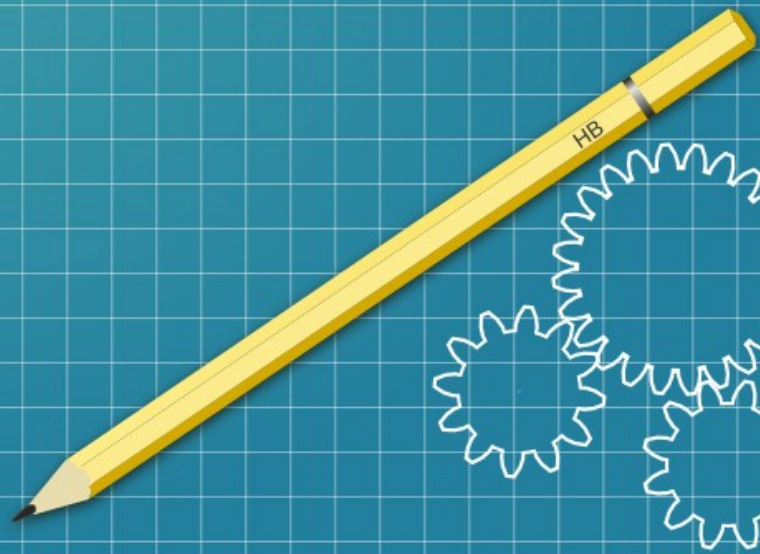


print("Hello, World!")

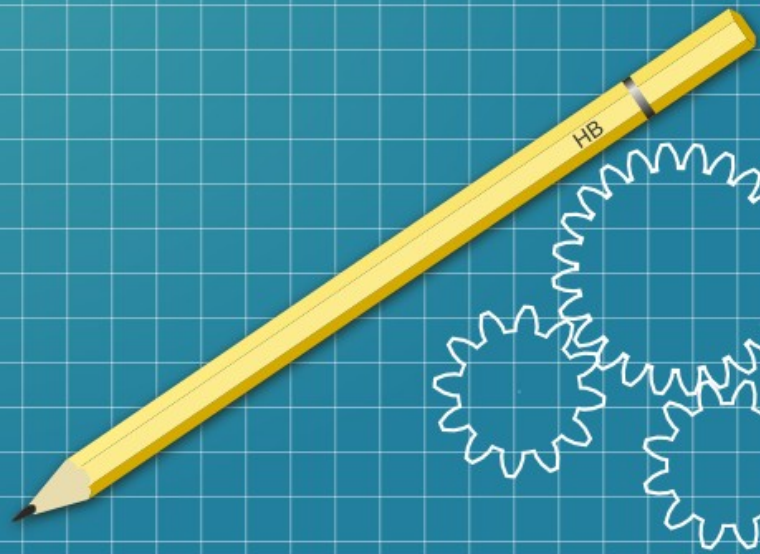
- Beginner-friendly
- Readable and simple syntax
- Widely used in many domains



Introduction to Python and Its Applications

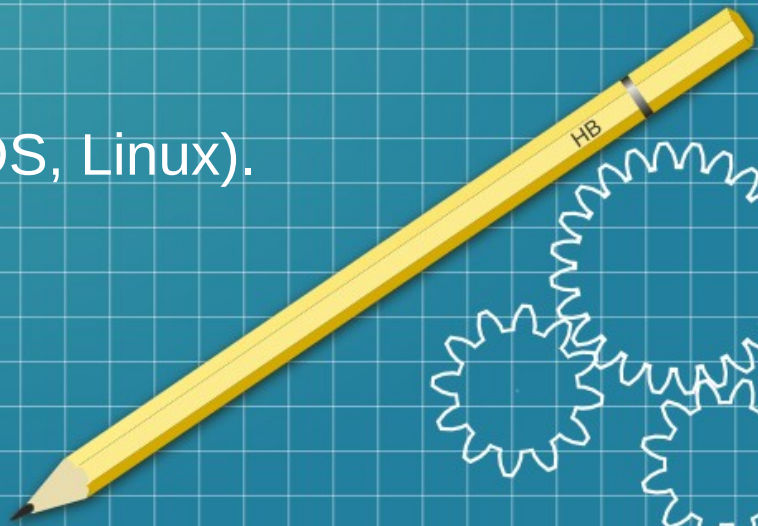


What is Python?

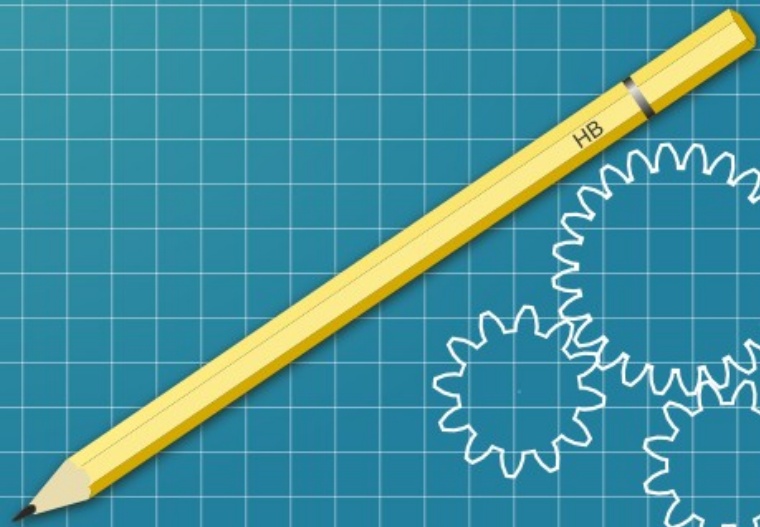


print("Hello")

- A high-level programming language created by Guido van Rossum in 1991
- Easy to read and write.
- Supports multiple platforms (Windows, macOS, Linux).
- Large community and extensive libraries

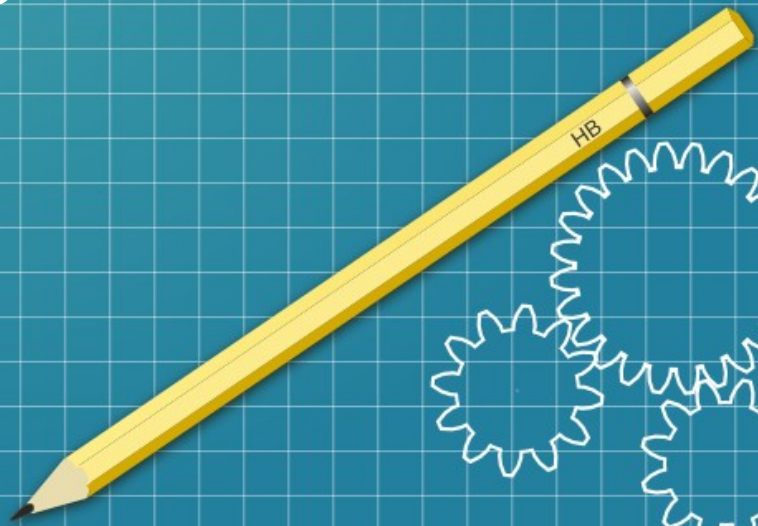


Features of Python

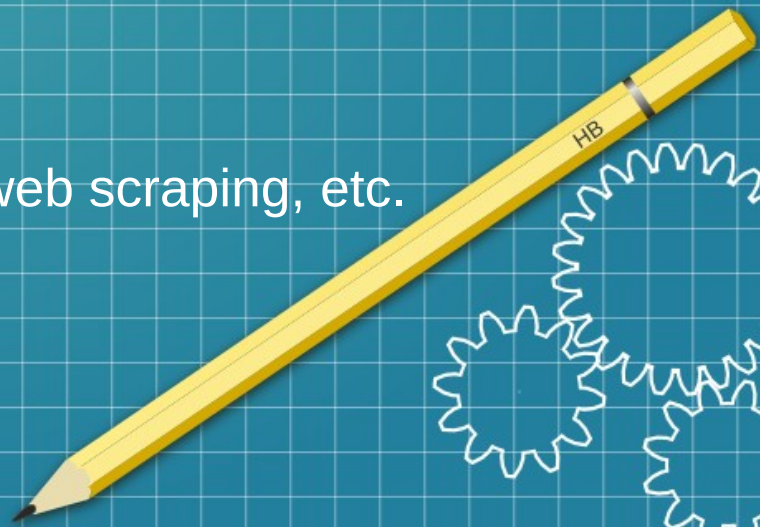


- Simple and beginner-friendly syntax.
- Open-source and free to use.
- Portable and can run anywhere.
- Versatile: used for scripting, development, and data analysis.

Applications of Python



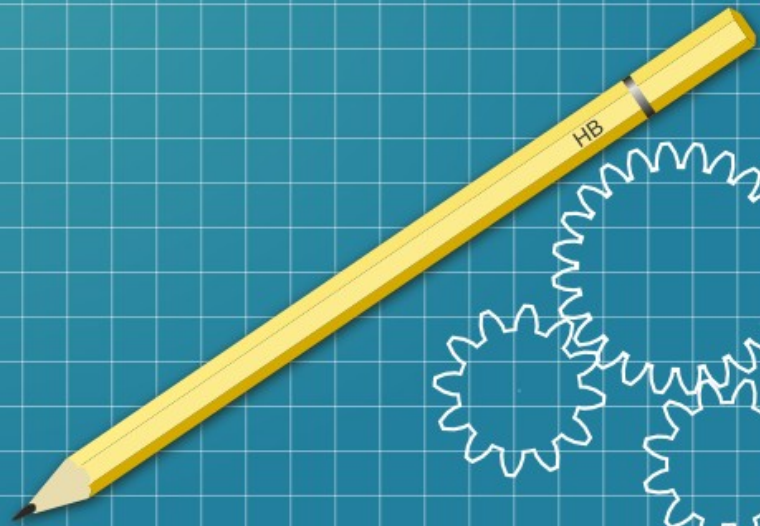
- Web Development: Django, Flask
- Machine Learning & AI: TensorFlow, PyTorch
- Data Analysis: Pandas, NumPy
- Game Development: Pygame
- Automation: Automate tasks like renaming files, web scraping, etc.



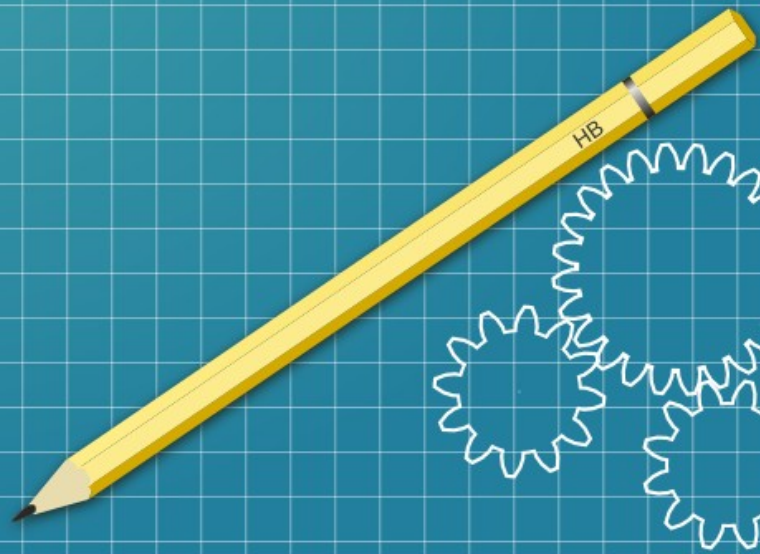
Integrated Development Environment

What is an IDE?

- run programs



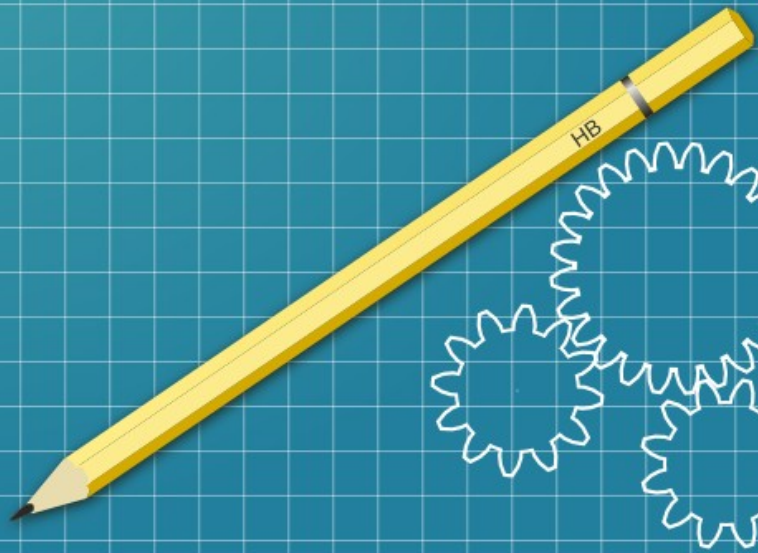
- An Integrated Development Environment is software where you write and run Python programs.



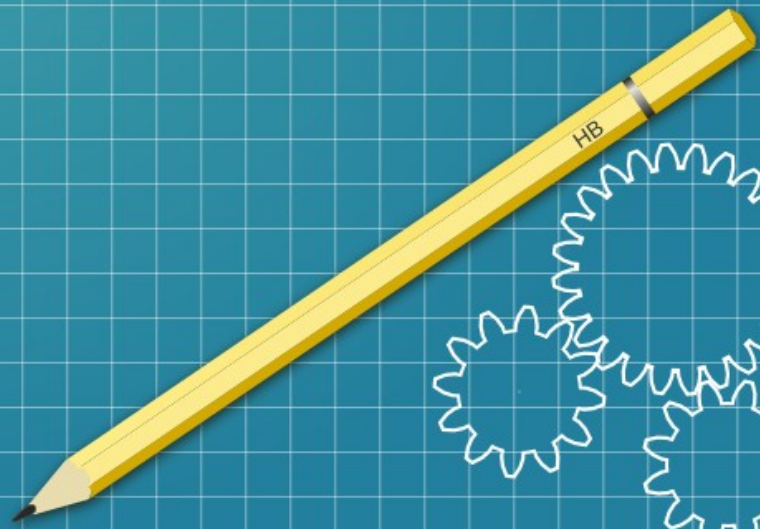
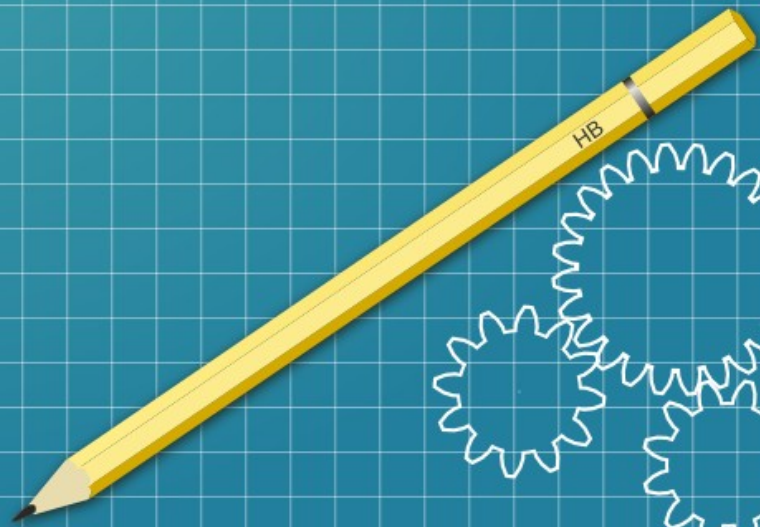
(VS Code)

Recommended IDE:

- Jupyter Notebook
- Google Colab



Setting Up the Python Environment



Writing and Running a Simple "Hello, World!" Program