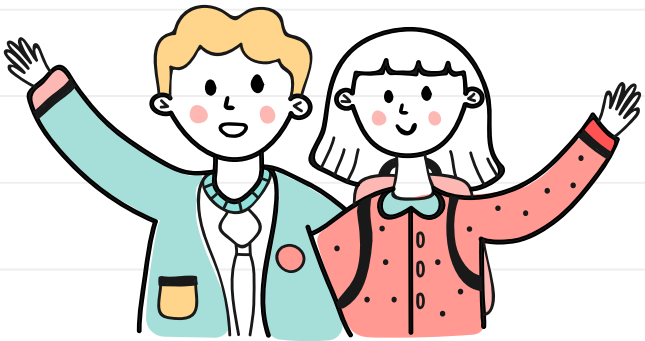
Programming Fundamentals using python



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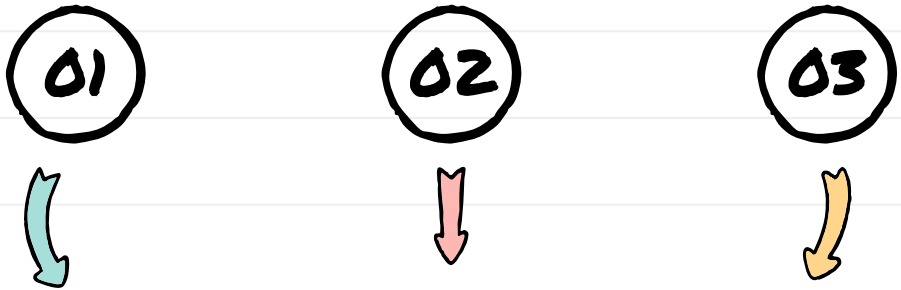
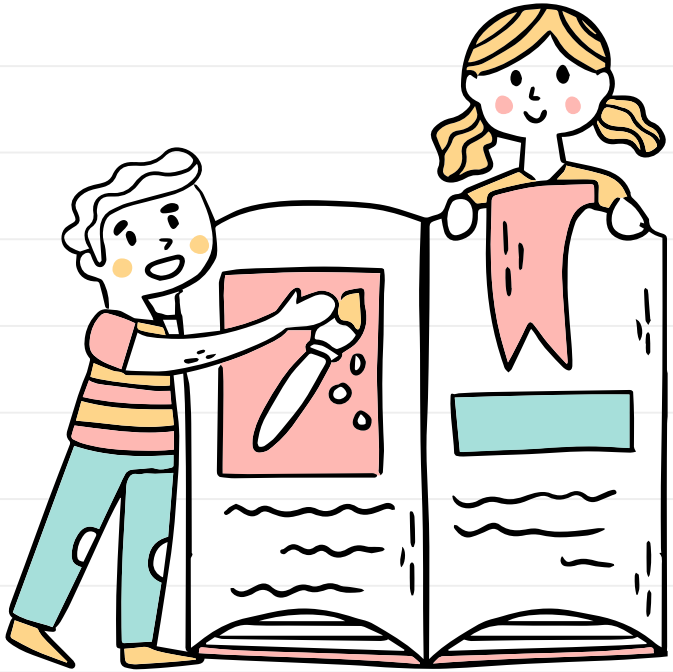


INTRODUCTION TO PYTHON

- **Guido van Rossum** created the Python programming language in the late 1980s.
- Python strives to provide a simple but powerful syntax.
- Python is used for software development at companies and organizations such as Google, Yahoo, Facebook.

Versions of Python

- In late 2008, Python 3.0 was released. Commonly called **Python 3**, the current version of Python is incompatible with earlier versions of the language.
- Currently the Python world still is in transition between Python 2 and Python 3.



Anaconda

- Anaconda is a free and open-source distribution of the Python and R programming languages for scientific computing.
- It simplifies the package management and deployment.
- Package versions are managed by the package management system **conda**.

Benefits of Using Python Anaconda

Libraries

Quickly download 1,500+ Python/R data science packages. Manage libraries, dependencies, and environments with Conda

Models

Develop and train machine learning and deep learning models with scikit-learn, TensorFlow, and Theano

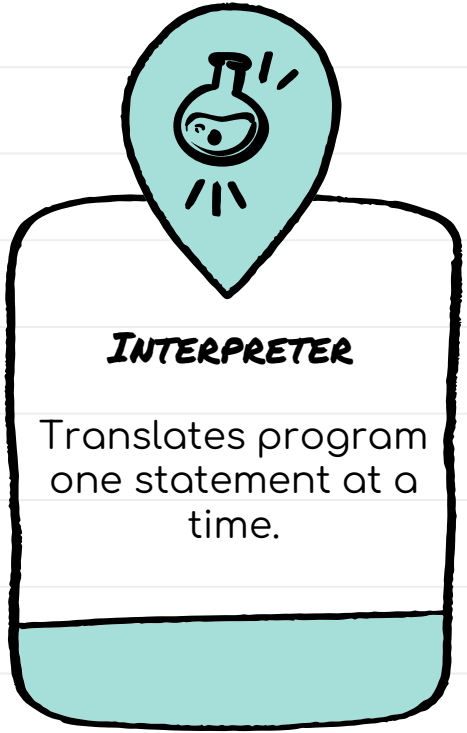
Analysis

Analyze data with scalability and performance with Dask, NumPy, pandas,and Numba

Visualization

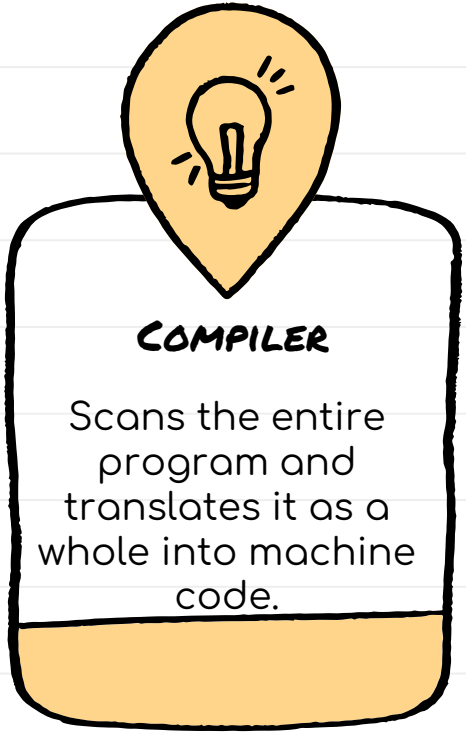
Visualize results with Matplotlib, Bokeh, Datashader, and Holoviews

Interpreter Vs Compiler



Interpreter

Translates program one statement at a time.



Compiler

Scans the entire program and translates it as a whole into machine code.

Python Script

- Spyder is an open source cross-platform integrated development environment for scientific programming in the Python language.
- Spyder has all the benefits of **a comprehensive development tool with the competences of a scientific package**.
- Programmers can extend Spyder by installing other plugins. Additionally, developers can use Spyder as a PyQt5 extension library.

THANKS!

Do you have any questions?
If yes, then comment.