

Python Notes - Topic 1: Introduction to Python

What is Python?

Python is a high-level, interpreted programming language created by Guido van Rossum in 1991. It is known for its simplicity, readability, and vast libraries.

Why Learn Python?

- Easy to read and write
- Great for beginners
- Used in web development, data science, AI, automation, etc.

Features of Python:

- Interpreted and interactive
- Object-oriented
- Extensive standard library
- Cross-platform
- Large community support

Applications of Python:

- Web Development (Django, Flask)
- Data Science (Pandas, NumPy)
- Machine Learning (scikit-learn, TensorFlow)
- Automation/Scripting
- Game Development (Pygame)

Installing Python:

Download from: <https://www.python.org/>

After installing, verify by running `python --version` in terminal or cmd.

Your First Python Program:

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Open your terminal and type:

```
print("Hello, World!")
```

This will output: Hello, World!

Python vs Other Languages:

- Simpler syntax than C/C++/Java
- Dynamically typed (no need to declare variable types)
- Faster to develop

Practice Questions:

1. What is Python?
2. Name 3 applications of Python.
3. Write a simple Python program to print your name.