

# Programming with Python – Overview (Page 1)

## 1. What is Python?

Python is a simple and powerful programming language used for building web applications, data analysis, automation, AI, and more.

## 2. Why Python is Popular?

- Very easy to learn
- Clean and readable syntax
- Large community support
- Works on all platforms
- Huge number of libraries

## 3. Key Features of Python

- High-level language
- Object-oriented
- Dynamically typed
- Open-source
- Supports GUI and web apps

## 4. Where Python is Used?

- Web development
- Data science & analytics
- Machine learning & AI
- Automation & scripting
- Game development
- Cybersecurity

# Programming with Python – Overview (Page 2)

## 5. Basic Python Concepts

- Variables and Data Types
- Conditions (if-else)
- Loops (for, while)
- Functions
- Lists, Tuples, Dictionaries

## 6. Advantages of Python

- Beginner-friendly
- Large standard library
- Faster development
- Versatile for many fields
- Strong community support

## 7. Popular Python Libraries

- NumPy (math & arrays)
- Pandas (data analysis)
- Matplotlib (visualization)
- Django/Flask (web apps)
- TensorFlow/PyTorch (AI/ML)

## 8. Conclusion

Python is one of the best languages for beginners and professionals. Its simplicity and power make it perfect for modern software development.