



PYTHON PROGRAMMING

Python Programming

Learn Python programming from the ground up through hands-on coding, logic building, automation projects, file handling, and real-world applications.

■ Beginner Friendly Step-by-step Python learning	■ Hands-on Coding Games, calculators & automation
■ Logic Building Problem-solving & programming concepts	■ Final Showcase Complete Python application

Curriculum Roadmap

1. Getting Started with Python

- Python setup
- Syntax & comments
- First Python program

2. Variables & Data Types

- Strings & numbers
- User input
- Simple calculator

3. Decision Making

- If-Else
- Logical operators
- Password checker

4. Loops & Patterns

- For & While loops
- Palindrome checker
- Fibonacci

5. Strings & Text Processing

- String operations
- Slicing
- Word guessing game

6. Lists & Data Handling

- Lists
- Nested lists
- Menu-driven program

7. Advanced Data Types

- Tuples
- Sets
- Dictionaries
- Movie database

8. Modules & Libraries

- Math & Random
- Date & Time
- Dice game

9. Functions

- Arguments
- Return values
- Rock-paper-scissors

10. File Handling

- Read & write files
- Quiz system

11. Advanced Applications

- Multiple modules
- Mini automation task

12. Final Project

- Complete Python application
- Testing & debugging
- Showcase

Learning Outcomes

- Understand Python programming fundamentals
- Build logical thinking and coding confidence
- Create games, utilities, and automation programs
- Work with files, modules, and data structures
- Develop complete Python-based applications

Code • Automate • Create • Innovate