

€ TRAINING

PCPP1 Certified Professional Python
Programmer Level 1





PCPP1 Certified Professional Python Programmer Level 1

Introduction:

This training program is designed to prepare participants for the certification exam only.

This training program is designed to equip experienced Python programmers with advanced skills, focusing on professional programming techniques, Python-ecosystem integrations, and developing complex applications. It prepares participants for the PCPP1 certification, highlighting key areas such as system operations, GUI programming, and network programming.

Program Objectives:

By the end of this program, participants will be able to:

- Employ advanced programming techniques to optimize Python code efficiency.
- Develop and deploy sophisticated graphical user interfaces GUIs.
- Utilize Python for network programming and managing system processes.
- Integrate Python applications with existing systems and platforms.
- Prepare for the PCPP1 - Certified Professional Python Programmer Level 1 certification exam.

Targeted Audience:

- Advanced Python programmers seeking professional certification.
- Software developers looking to specialize in Python for system automation, GUIs, or network programming.
- IT professionals who require in-depth Python skills for integration and application development.
- Technical team leaders and project managers overseeing Python projects.

Program Outline:

Unit 1:

Advanced System Operations:

- Automating system administration tasks using Python scripts.
- Interacting with the operating system through the os and sys modules.



- Managing file system: files and directories operations.
- Scheduling tasks and automating scripts execution.

Unit 2:

GUI Programming with Python:

- Introduction to Tkinter and creating basic GUI applications.
- Layout management in GUI design: mastering widgets and geometry management.
- Advanced GUI components: menus, toolbars, dialogs, and status bars.
- Event handling and callbacks for interactive applications.
- Developing applications using alternative Python GUI frameworks like PyQt or wxPython.

Unit 3:

Network Programming:

- Basics of network protocols: TCP/IP, HTTP, and FTP.
- Creating network applications using sockets.
- Implementing client-server architectures in Python.
- Utilizing high-level network modules such as requests and urllib.
- Developing RESTful APIs with Flask or Django.

Unit 4:

Python Enhancement Proposals PEP and Best Practices:

- Understanding PEP standards: PEP 8, PEP 257, and others.
- Implementing coding standards and improving code readability.
- Advanced programming concepts: decorators, context managers, and descriptors.
- Employing Python libraries for logging, testing, and debugging.

Unit 5:

PCPP1 Exam Preparation and Review:



- Overview of the Certification Exam Structure.
- Key Topics and Areas of Focus for the Exam.
- Sample Questions and their Potential Answers.
- Resources and Materials for Effective Exam Preparation.

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