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Advanced Python 3 Programming Training

This advanced training addresses the programming language's more complicated features such as high level data structures, constructing GUIs, network and CGI programming.

Course Overview

Our 2-day, instructor-led Advanced Python 3 Programming Training course, students already familiar with Python programming will learn the following:

- Advanced Python techniques such as Jupyter Notebook, the Collections module
- Mapping and filtering, lambda functions, advanced sorting
- Working with regular expressions in Python
- Working with databases, CSV files, JSON and XM
- Writing object-oriented code, testing and debugging
- Unicode and text encoding.

Students should be familiar with Python programming. This knowledge can be developed in the [Introduction to Python 3 Programming Training](#) course.

Course Outline

Advanced Python Concepts

- Lambda functions
- Advanced list comprehensions
- Exercise - rolling 5 dice
- Collections module
- Exercise - creating a defaultdict
- Exercise - creating a OrderedDict



- Exercise - creating a counter
- Exercise - working with a deque
- Mapping and filtering
- Mutable and immutable built-in objects
- Sorting
- Exercise - converting list.sort() to sorted (iterable)
- Unpacking sequences in functions calls
- Exercise - converting a string to a datetime.date object
- Modules and packages

Working With Data

- Relational databases
- Exercise - querying a SQLite database
- Exercise - inserting file data into a database
- CSV
- Exercise - comparing data in a CSV file
- Getting data from the web
- Exercise - requests and beautiful soup
- JSON
- Exercise - using JSON to print course data

Testing And Debugging

- Testing for performance
- The unittest module
- Exercise - fixing functions

Classes And Objects

- Attributes
- Behaviors
- Classes vs objects
- Attributes and methods
- Exercise - adding a roll() method to die
- Private attributes
- Properties
- Exercise - properties
- Documenting classes
- Exercise - documenting the die class
- Inheritance



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- Exercise - extending the die class
- Exercise - extending the roll() method
- Static methods
- Class attributes and methods
- Abstract classes and methods
- Understanding decorators

Advanced Python 3 Programming Training FAQs

Who should take Advanced Python 3 Programming Training?

Programmers seeking to advance their Python programming skills and basic programmers who want to learn how to incorporate the language into frameworks, software and other programs.



Price Match Guarantee

We'll match any competitor's price quote. Call us at 240-667-7757.

This **Advanced Python 3 Programming Training** class includes:

- 2 days instructor-led training
- Advanced Python 3 Programming Training book
- Notepad, pen and highlighter
- Variety of bagels, fruits, doughnuts and cereal available at the start of class*
- Tea, coffee and soda available throughout the day*
- Freshly baked cookies every afternoon*



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**denotes this benefit is only available at participating locations*