

Python Part 2: Tools, Modules, and JSON - Retired2020

Modality: On Demand

Duration: 4 Hours

About this course:

The Python Tools, Modules and JSON course will enable the students to learn the more advanced concepts of writing and running Python scripts. The course builds on the Python Fundamentals course and covers the more complex topics such as iterators and generators, regular expressions, introspection and lambda functions, metaclasses and decorators, and using the extensive functionality of Python modules. Extra emphasis is placed on features unique to Python, such as metaprogramming and JSON. After completing this course, the students will immediately be able to use Python to complete tasks in the real world.

The Python Tools, Modules and JSON course will comprehensively cover the more advanced topics related to the Python programming language with primary focus on the several tools, modules and JSON. The course enables the students to code efficient scripts to solve the real-world problems using the advanced features of Python.

Course Objective:

- Create working Python scripts following best practices
- Use python iterators and generators appropriately
- Use regular expressions, lambda functions and decorators
- Search and replace text with regular expressions
- Work with modules and packages including APIs
- Learn metaprogramming
- Understand the structure of XML and JSON

Audience:

- Advanced level programmers
- System administrators who want to use Python to support their server installations
- Website administrators who want to use Python to support their web-servers
- IT professionals who want to automate or simplify common tasks with the use of Python scripts

Prerequisite:

- The Python Tools, Modules and JSON is part of the two-course series on Python.
- The candidates wishing to register for this course are required to have completed the Python Fundamentals course.
- In addition to this, a basic understanding of the Python language and standard library is also recommended.

Course Outline:

Chapter 01 - Programming Tools

- **Topic A: Iterators and Generators - Part 1**
- Iterators and Generators - Part 2
- Iterators and Generators - Part 3
- **Topic B: Regular Expressions - Part 1**
- Regular Expressions - Part 2
- Regular Expressions - Part 3
- **Topic C: Introspection and Lambda Functions - Part 1**
- Introspection and Lambda Functions - Part 2
- Introspection and Lambda Functions - Part 3
- **Topic D: Metaclasses and Decorators - Part 1**
- Metaclasses and Decorators - Part 2
- Metaclasses and Decorators - Part 3

Chapter 02 - Modules and Packages

- **Topic A: Modules and Packages - Part 1**
- Modules and Packages - Part 2
- Modules and Packages - Part 3
- **Topic B: Working with APIs - Part 1**
- Working with APIs - Part 2
- Working with APIs - Part 3

Chapter 03 - Metaprogramming and JSON

- **Topic A: Metaprogramming Primer - Part 1**
- Metaprogramming Primer - Part 2
- Metaprogramming Primer - Part 3
- **Topic B: Decorators and Monkey Patching - Part 1**
- Decorators and Monkey Patching - Part 2
- Decorators and Monkey Patching - Part 3
- **Topic C: XML and JSON Structure - Part 1**
- XML and JSON Structure - Part 2
- XML and JSON Structure - Part 3
- **Topic D: Generating XML and JSON - Part 1**
- Generating XML and JSON - Part 2
- Generating XML and JSON - Part 3
- **Topic E: Parsing XML and JSON - Part 1**
- Parsing XML and JSON - Part 2
- Parsing XML and JSON - Part 3
- **Topic F: Implementing Algorithms - Part 1**
- Implementing Algorithms - Part 2
- Implementing Algorithms - Part 3