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Python Programming

(4 days)

Course overview

Python is a powerful and popular object-oriented scripting language. This course provides a comprehensive introduction to the core syntax and functions provided by Python, including full coverage of its object-oriented features. The course also explores some of Python's powerful APIs and techniques, including file handling, XML processing, object serialization, and Web services.

What you'll learn

- Writing clean Python code
- Working with functions and objects
- Working with text and regular expressions
- Handling exceptions
- Manipulating files and XML data
- Working with web services

Prerequisites

- At least 6 months programming experience
- Familiarity with OO concepts would be an advantage

Course details

- **Getting Started with Python:** Overview of Python; Installing Python; Getting ready to develop
- **Python Language Fundamentals:** Overview of core Python syntax rules; Simple data types and variables; Object essentials; Flow control
- **Working with Functions:** The benefit of functions; Writing and calling functions; Passing parameters
- **Exception Handling:** Overview of exceptions in Python; Handling exceptions; Raising exceptions; Design issues
- **Collections:** Overview of collections in Python; Lists; Tuples; Sets; Dictionaries
- **Strings and Regular Expressions:** Overview of strings in Python; Basic string manipulation; Introduction to regular expressions; Using regular expressions in Python
- **Classes and Iterators:** Defining classes; Instance variables; Iterators; Creating and initializing objects
- **File Handling:** Overview of file handling in Python; Reading and writing text files; Working with binary files; Streaming and serializing Python objects

- [XML Processing](#): XML essentials; Parsing XML documents; Searching for XML content; Generating XML data
- [Web Services](#): Overview of Web services; Implementing Web services using Python; Caching; Compression; Handling redirects