



Practical Python Programming

Course description

This course is designed for new software developers, scientists, engineers and analysts who like to build their career as BIG Data Programmers using Python, complex financial calculations and Python for web developers. The course focuses on to the Python programming language, standard library, and Python programming techniques. The course is strongly focused on practical applications including scripting, data processing, systems administration, and integrating Python with other software

Practical Python Programming online training curriculum

Python advanced training: Introduction and features of Python

- Installation
- Python Interpreter
- Basic Syntax
- Operators

Working with Data

- Tuples, Lists, Dictionaries, and Sets
- Numpy arrays
- Object model including variables, reference counting, copying
- Processing primitives

Program Organization and Functions

- Design function
- Scoping rules

Modules and Libraries

- Organizing programs into modules
- Using Modules to create extensible programs
- Commonly used library modules including those related to system administration, text processing, sub processes, XML parsing, binary data handling, and databases

Classes and Objects

- Introduction to object-oriented programming
- Create new objects, overload operators, and utilize Python special methods
- Inheritance and composition

Inside the Python Object System

- Detailed look into how objects are implemented in Python
- Object representation
- Attribute binding
- Inheritance, memory management
- Classes properties
- Classes slots, and private attributes

Testing, Debugging, and Software Development Practice

- Important to Python software development
- Program testing using both the doc-test and unit-test modules
- Use of assertions
- The Python debugger and profiler

Iterators and Generators

- Iteration protocol and iterable objects,
- Data processing pipelines
- Processing large data files, handling infinite data streams

➤ **The role of Python in BIG Data Analysis**

➤ **The role of Python in financial calculation and analysis**