Python Programming 2

Duration: 2 Days Course Code: PYP2 Delivery Method: Company Event

Overview:

The Python Programming 2 course comprises sessions dealing with advanced object orientation,iterators and generators,comprehensions,decorators,multithreading,functional programming,web services,and unit testing.
The delegate will learn how to exploit advanced features of the Python language to build complex and efficient applications.
Exercises and examples are used throughout the course to give practical hands-on experience with the techniques covered.

Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

Target Audience:

The Python Programming 2 course is designed for existing Python developers who have a good grounding in the basics and want to exploit some of the advanced features of the language.
For the delegate for whom Python is their first programming language,we recommend taking the Python Programming 1 course first,then taking some time to practice the skills gained,before returning to take the Python Programming 2 course.

Objectives:

- This course aims to provide the delegate with the knowledge to be able to interpret,write,and troubleshoot complex Python applications exploiting inheritance and polymorphism,mixins,composition and aggregation,iterators,generators,decorators,comprehension,concurrency,functional programming,and RESTful web services.

Prerequisites:

Delegates should be able to build Python applications that exploit all fundamental elements of the language including variables and expressions,conditions and loops,functions,objects,and lists.

This knowledge can be gained by attendance on the pre-requisite Python Programming 1 course.

Follow-on-Courses:

- Python Programming 1 (PYP1)

Content:

Python Programming 2 Training Course Course Contents - DAY 1

Course Introduction

- Administration and Course Materials
- Course Structure and Agenda
- Delegate and Trainer Introductions

Session 1: ADVANCED OBJECT ORIENTATION

- The self Keyword
- Constructors and Destructors
- Encapsulation
- Inheritance
- Polymorphism
- Abstract Classes
- Multiple Inheritance and Mixins
- Composition and Aggregation
- Static Members

Session 2: ITERATORS ; GENERATORS

- Iterables
- Iterators
- Custom Iterators
- Generators
- Yield vs. Return

Session 3: COMPREHENSIONS

- List Comprehension
- Set Comprehension
- The zip Function
- Dictionary Comprehension

Session 4: DECORATORS

- Decorators
- Decorator Functions
- Decorator Annotations
- Decorator Use Cases
- Labs Python Programming 2 Training Course Course Contents - DAY 2

Session 5: MULTITHREADING

- Threads
- Multithreading
- Thread Construction
- Thread Execution
- Thread Sleep
- Joins
- Data Sharing
- Synchronisation
- Multithreading vs. Multiprocessing

Session 6: FUNCTIONAL PROGRAMMING

- Functional Programming
- Lambdas
- Immutability
- Mapping
- Filtering
- Reducing

Session 7: WEB SERVICES

- RESTful Web Services
- JSON Data
- CRUD and HTTP
- RESTful Clients
- RESTful APIs

Session 8: UNIT TESTING

- Unit Testing Terminology
- Test Classes
- Test Fixtures
- Test Cases
- Assertions
- Test Runners

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

info@globalknowledge.co.uk

www.globalknowledge.com/en-gb/

Global Knowledge, Mulberry Business Park, Fishponds Road, Wokingham Berkshire RG41 2GY UK