Introduction to Python

Duration: 4 Days Course Code: GK2354

Overview:

In this Python training course, students learn to program in Python. The course is aimed at students new to the language who may or may not have experience with other programming languages.
This Python course is taught using Python 3; however, differences between Python 2 and Python 3 are noted.

Target Audience:

The course is aimed at students new to the language who may or may not have experience with other programming languages.

Objectives:

- Learn how Python works and what it's good for.
- Understand Python's place in the world of programming languages
- Learn to work with and manipulate strings in Python.
- Learn to perform math operations with Python.
- Learn to work with Python sequences: lists, arrays, dictionaries, and sets.
- Learn to collect user input and output results.
- Learn flow control processing in Python.
- Learn to write to and read from files using Python.
- Learn to write functions in Python.
- Learn to handle exceptions in Python.
- Learn to work with dates and times in Python.

Prerequisites:

Experience with a programming language (preferably a C-based language)

Testing and Certification

Content:

1. Python Basics

- Running Python
- Hello, World!
- Literals
- Python Comments
- Data Types
- Variables
- Writing a Python Module
- print() Function
- Named Arguments
- Collecting User Input
- Getting Help

2. Functions and Modules

- Defining Functions
- Variable Scope
- Global Variables
- Function Parameters
- Returning Values
- Importing Modules

3. Math

- Arithmetic Operators
- Modulus and Floor Division
- Assignment Operators
- Built-in Math Functions
- The math Module
- The random Module
- Seeding

4. Python Strings

- Quotation Marks and Special Characters
- String Indexing
- Slicing Strings
- Concatenation and Repetition
- Common String Methods
- String Formatting
- Built-in String Functions

5. Iterables: Sequences, Dictionaries, and Sets

- Definitions
- Sequences
- Unpacking Sequences
- Dictionaries
- The len() Function
- Sets
- *args and **kwargs

6. Flow Control

- Conditional Statements
- The is and is not Operators
- Python's Ternary Operator
- Loops in Python
- The enumerate() Function
- Generators
- List Comprehensions

7. File Processing

- Opening Files
- The os and os.path Modules

8. Exception Handling

- Wildcard except Clauses
- Getting Information on Exceptions
- The else Clause
- The finally Clause
- Using Exceptions for Flow Control
- Exception Hierarchy

9. Dates and Times

- Understanding Time
- The time Module
- The datetime Module

10. Running Python Scripts from the Command Line

- The sys Module
- sys.argv

Further Information:

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

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