PURPLE GRIFFON
The IT Service Management Training & Consultancy Specialists

Course Title: Introduction To Python	**Course Duration**: 3.0 Days
Exam: Included	**Exam Type**: Proctored Exam
Qualification: Introduction To Python Certificate	

Course Syllabus

Our Introduction To Python training course contains the following modules:

Module 1: Python Overview

- Enter statements into the Python Console
- Identify and access documentation

Module 2: Working with Numbers and Strings

- Define an object and a type
- Assign objects to variables
- Employ arithmetic operators
- Use string operations and methods
- Index and slice strings
- Make decisions using the if statement

Module 3: Collections

- Learn about lists, tuples, dictionaries and sets
- Create and modify list operators and methods
- Index and slice lists and tuples
- Create and process dictionaries using functions and methods
- Perform set arithmetic
- Test for membership in a collection
- Iterate using for and while loops
- Apply list comprehensions

Module 4: Functions

- Create functions
- Call functions using positional and keyword argument passing
- Handle unlimited numbers of keyword or positional arguments
- Return values from functions
- Know the 4 levels of scope
- Create and call lambda functions

Module 5: Object-Oriented Programming

- Define classes

- Add attributes using the constructor method
- Add additional methods to objects
- Access class attributes
- Leverage inheritance

Module 6: Modules

- Import additional modules
- Access attributes from another namespace
- Inspect the current namespace
- Test the __name__ attributes
- Access modules from the standard library
- Navigate package contents

Module 7: Managing Exceptions and Files

- Handle exceptions raised by Python
- Raise exceptions
- Open, close, read and write to files
- Iterate through a file
- Leverage the context manager to open and close files
- Define the 3 standard streams

Module 8: Accessing Relational Databases with Python

- Describe a relational database
- Describe the steps to access a database from a Python program
- Create a database connection
- Interact with the database through a cursor
- Execute SQL statements using a cursor

Course Overview

Our three-day Introduction To Python training course will provide a foundation for learning and understanding the Python programming language. Python is a versatile and widely used programming language known for its simplicity, readability, and a large number of libraries and frameworks that make it suitable for various applications. We will teach you how to use Python’s features, standard library modules, and third-party software packages.

Course Learning Outcomes

Our Introduction To Python training course will teach you how to:

- Rapidly develop feature-rich applications using Python's built-in statements, functions, and collection types.
- Structure code with classes, modules, and packages that leverage object-oriented features.
- Create multiple data accessors to manage various data storage formats.
- Access additional features with library modules and packages.

Audience

Our Introduction To Python training course appeals to a diverse range of individuals with different backgrounds and interests. Including but limited to:

- **Beginners**: Python is widely regarded as a beginner-friendly programming language.
- **Students**: Python has become a popular choice in educational institutions.
- **Data Scientists and Analysts**: Python has gained significant traction in the field of data science and analytics.
- **Web Developers**: Python offers several frameworks, including Django and Flask, that simplify web development.
- **Automation and Scripting Enthusiasts**: Python's ease of use and its ability to automate tasks make it a popular choice for automation and scripting.
- **AI and Machine Learning Practitioners**: Python has become the de facto language for AI and machine learning.
- **Hobbyists and Tinkerers**: Python's versatility and extensive libraries make it appealing to hobbyists and enthusiasts who enjoy exploring various projects.

Entry-Level Requirements

Our Introduction To Python training course requires the following Prerequisites:

- Experience with another procedural or object-oriented programming language, such as C, C++, Java, VB .NET, or SQL
- Familiarity with concepts, such as variables, loops, and branches with some experience using a text editor to edit programme code

Recommended Reading

There is no recommended reading for our Introduction To Python training course but the following reading materials may provide some help:

- "Python Crash Course" by Eric Matthes: This book is widely regarded as an excellent resource for beginners.
- "Automate the Boring Stuff with Python" by Al Sweigart: This book focuses on using Python for practical tasks, automation, and scripting.
- "Learning Python" by Mark Lutz: Considered a comprehensive guide to Python, this book covers the language in-depth.
- "Fluent Python" by Luciano Ramalho: This book is targeted at intermediate Python developers who want to deepen their understanding of the language and write more idiomatic and efficient code.
- "Python for Data Analysis" by Wes McKinney: This book focuses on using Python for data manipulation, analysis, and visualization.

What's Included

Our three-day Introduction To Python Training Course includes the following:

- Pre-reading
- Course Manuel
- Quizzes
- Exercises

Exam Information

Introduction To Python Exam:

- Format: Multiple Choice
- Questions: 40
- Pass Mark: 70% (28/40 Correct Answers)

What's Next

You might enjoy our three-day Introduction To SQL training course.

- Write SQL code based on Wrap in ANSI/ISO standards to build database structures.
- Update database content with SQL and transaction handling.
- Retrieve data with filter conditions and from multiple tables using various types of joins.
- Process data with row and aggregate functions.
- Leverage continued support with after-course one-on-one instructor coaching and computing sandbox.

Additional Information

Learning Python offers numerous benefits, which contribute to its widespread popularity among programmers and professionals across various fields. Here are some of the key benefits of learning Python:

- **Simplicity and Readability**: Python has a clean and intuitive syntax, making it easy to read and write code. Its simplicity allows beginners to grasp the language quickly and experienced programmers to write code more efficiently.
- **Versatility and Broad Application**: Python is a versatile language used in a wide range of domains. Whether you're interested in web development, data analysis, scientific computing, machine learning, artificial intelligence, automation, or scripting, Python has extensive libraries and frameworks to support these applications.
- **Large and Active Community**: Python has a large and active community of developers, enthusiasts, and experts. This community contributes to the growth and improvement of Python by providing extensive resources, documentation, and support.
- **Abundance of Libraries and Frameworks**: Python boasts an extensive ecosystem of libraries and frameworks. Libraries like NumPy, Pandas, Matplotlib, and scikit-learn provide powerful tools for data analysis, visualization, and machine learning.
- **High Demand in the Job Market**: Python is in high demand in the job market, especially in fields like data science, machine learning, and web development. Learning Python can open up various career opportunities and increase your chances of landing a job in these thriving industries.
- **Rapid Prototyping and Development**: Python's simplicity and large library support make it ideal for rapid prototyping and development. It allows you to quickly turn ideas into working prototypes and iterate on them faster.
- **Cross-Platform Compatibility**: Python is a cross-platform language, meaning it can run on different operating systems such as Windows, macOS, and Linux. This compatibility ensures that your Python code can be easily deployed and executed on various platforms