

# Professional Python Developer 45 Days (90 Hr.)

| Sr. No. | Chapters                         | Sub Chapters                              |
|---------|----------------------------------|---|
| 1       | Introduction                     | Introduction to Python Language           |
|         |                                  | Industrial Importance of Python Language  |
|         |                                  | Features of Python Language               |
|         | Environment Setup                | Getting Started with Python               |
|         |                                  | Installing Python                         |
|         |                                  | Unix and Linux Installation in Python     |
|         |                                  | Windows Installation                      |
|         |                                  | Setting up PATH                           |
|         |                                  | Setting path at Unix / Linux              |
|         |                                  | Setting path at Windows                   |
|         |                                  | Script Programming                        |
|         |                                  | Python Identifiers                        |
|         |                                  | Python Keywords                           |
|         |                                  | Python Lines and Indentation              |
|         |                                  | Python Multi-Line Statements              |
|         |                                  | Quotation in Python                       |
|         |                                  | Comments in Python                        |
|         |                                  | Using Blank Lines                         |
|         |                                  | Multiple Statements on a Single Line      |
|         |                                  | Variables and Data Types in Python        |
|         |                                  | Multiple Assignment in Python Programming |
|         |                                  | Standard Data Types in Python             |
|         |                                  | Data Type Conversion in Python            |
|         |                                  | Python Input and Output                   |
|         | Python - Operators               | Types of Different Operators in Python    |
|         |                                  | Changing the Order of Evaluation          |
|         | Conditional statements in Python | if statements                             |

## Professional Python Developer 45 Days (90 Hr.)

|                               |                                   |
|-------------------------------|-----------------------------------|
| Programming                   |                                   |
|                               | if...else statements              |
|                               | The elif Statement                |
|                               | Nested if statements              |
| LOOPS in Python Programming   | While loop                        |
|                               | The Infinite Loop                 |
|                               | Using else Statement with Loops   |
|                               | For loop                          |
|                               | Nested loops                      |
|                               | Loop Control Statements           |
| Strings in Python Programming | Accessing Values in Strings       |
|                               | Updating Strings                  |
|                               | Escape Characters                 |
|                               | String Special Operators          |
|                               | String Formatting Operator        |
|                               | Triple Quotes                     |
| Lists in Python Programming   | Python Lists                      |
|                               | Accessing Values in Lists         |
|                               | Updating Lists                    |
|                               | Delete List Elements              |
|                               | Basic List Operations             |
|                               | Indexing, Slicing, and Matrixes   |
|                               | Built-in List Functions & Methods |
| Tuples                        | Python Tuples                     |
|                               | Accessing Values in Tuples        |
|                               | Updating Tuples                   |
|                               | Delete Tuple Elements             |
|                               | Basic Tuples Operations           |

## Professional Python Developer 45 Days (90 Hr.)

|                                  |  |   |
|----------------------------------|--|---|
|                                  |  | Indexing, Slicing, and Matrixes         |
|                                  |  | No Enclosing Delimiters                 |
|                                  |  | Built-in Tuple Functions                |
| Dictionary in Python Programming |  | Python Dictionary                       |
|                                  |  | Accessing Values in Dictionary          |
|                                  |  | Updating Dictionary                     |
|                                  |  | Delete Dictionary Elements              |
|                                  |  | Properties of Dictionary Keys           |
|                                  |  | Built-in Dictionary Functions & Methods |
| Functions in Python Programming  |  | Calling a Function                      |
|                                  |  | Pass by reference Vs. value             |
|                                  |  | Function Arguments                      |
|                                  |  | Required arguments                      |
|                                  |  | Keyword arguments                       |
|                                  |  | Default arguments                       |
|                                  |  | Variable-length arguments               |
|                                  |  | The Anonymous Functions                 |
|                                  |  | The return Statement                    |
|                                  |  | Scope of Variables                      |
|                                  |  | Global vs. Local variables              |
|                                  |  | The global statement                    |
| Modules in Python Programming    |  | The import Statement                    |
|                                  |  | The from...import Statement             |
|                                  |  | The from...import * Statement           |
|                                  |  | Locating Modules                        |
|                                  |  | The PYTHON PATH Variable                |
|                                  |  | The time Module                         |
|                                  |  | Getting current time                    |

## Professional Python Developer 45 Days (90 Hr.)

|                           |   |
|---------------------------|---|
|                           | Getting formatted time                                      |
|                           | The calendar Module   |
| File I/O Operations       | Reading and writing files                                   |
|                           | Access modes of files                                       |
| Exception Handling        | Handling a exception  |
|                           | Multiple exceptions   |
|                           | User-defined exceptions                                     |
| OOPs with Python          | Overview of OOP terminology                                 |
|                           | Defining Classes and Objects                                |
|                           | Working with Inheritance                                    |
|                           | Abstract Classes  |
| Regular Expressions       | Working with 're' module                                    |
|                           | Search, replace and pattern checking                        |
| Reference Types           | Iterators, Generators                                       |
|                           | Closures, Decorators  |
| Database Access in python | Database Introduction and types                             |
|                           | Working with SQLite database                                |
|                           | Create, Alter, Drop Tables                                  |
|                           | Insert, Select, Update , Delete functions                   |
| Multi threading           | Threading concept   |
|                           | Working with threading module                               |
| Socket Programming        | Introduction to sockets                                     |
|                           | Working with socket module                                  |
|                           | UDP and TCP client-server connection                        |
| GUI Creation              | Working with Tkinter module                                 |
|                           | Creating graphical Windows, Frame                           |
|                           | Creating Text box, Label, Check buttons ,Radian buttons etc |