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Industrial Certified Professional Python

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Professional Python Developer

Chapter 1 : Introduction

- Introduction to Python Language
- Industrial Importance of Python Language
- Features of Python Language

Chapter 2 : 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



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Chapter 3 : Starting With Python Programs

- 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

Chapter 4 : Python - Operators

- Types of Different Operators in Python
- Changing the Order of Evaluation



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Chapter 5 : Conditional statements in Python Programming

- if statements
- if...else statements
- The elif Statement
- Nested if statements

Chapter 6 : LOOPS in Python Programming

- While loop
- The Infinite Loop
- Using else Statement with Loops
- For loop
- Nested loops
- Loop Control Statements

Chapter 7 : Strings in Python Programming

- Accessing Values in Strings
- Updating Strings
- Escape Characters
- String Special Operators
- String Formatting Operator



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- Triple Quotes

Chapter 8 : 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

Chapter 9 : Tuples

- Python Tuples
- Accessing Values in Tuples
- Updating Tuples
- Delete Tuple Elements
- Basic Tuples Operations
- Indexing, Slicing, and Matrixes
- No Enclosing Delimiters
- Built-in Tuple Functions



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Chapter 10 : Dictionary in Python Programming

- Python Dictionary
- Accessing Values in Dictionary
- Updating Dictionary
- Delete Dictionary Elements
- Properties of Dictionary Keys
- Built-in Dictionary Functions & Methods

Chapter 11 : 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



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- Global vs. Local variables
- The global statement

Chapter 12 : 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
- Getting formatted time
- The calendar Module

Chapter 13 : File I/O Operations

- Reading and writing files
- Access modes of files

Chapter 14 : Exception Handling

- Handling a exception
- Multiple exceptions



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- User-defined exceptions

Chapter 15 : OOPs with Python

- Overview of OOP terminology
- Defining Classes and Objects
- Working with Inheritance
- Abstract Classes

Chapter 16 : Regular Expressions

- Working with 're' module
- Search, replace and pattern checking

Chapter 17 : Reference Types

- Iterators, Generators
- Closures, Decorators

Chapter 18 : Database Access in python

- Database Introduction and types
- Working with SQLite database
- Create, Alter, Drop Tables
- Insert, Select, Update , Delete functions

Chapter 19 : Multi threading

- Threading concept
- Working with threading module



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Chapter 20 : Socket Programming

- Introduction to sockets
- Working with socket module
- UDP and TCP client-server connection

Chapter 21 : GUI Creation

- Working with Tkinter module
- Creating graphical Windows, Frame
- Creating Text box, Label, Check buttons ,Radian buttons etc