# **INFOSOFT IT SOLUTIONS**

#### **Training | Projects | Placements**

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## **IronPython**

#### **Introduction to IronPython**

- 1.1 Overview of IronPython
- 1.2 History and Evolution
- 1.3 Features and Advantages
- 1.4 Installation and Setup

#### **Basic Syntax and Data Types**

- 2.1 Python Syntax Refresher
- 2.2 Variables and Data Types
- 2.3 Operators
- 2.4 Control Flow (if, elif, else, loops)

#### **Working with .NET Framework**

- 3.1 Introduction to .NET Framework
- 3.2 .NET Libraries and Assemblies
- 3.3 Interacting with .NET Objects

- 3.4 Importing .NET Assemblies
- 3.5 Calling .NET Methods and Properties

#### **Advanced IronPython Concepts**

- 4.1 Exception Handling
- 4.2 Working with Collections (Lists, Tuples, Dictionaries)
- 4.3 Object-Oriented Programming in IronPython
- 4.4 Lambda Functions and Closures
- 4.5 Decorators

#### **GUI Development with IronPython**

- 5.1 Introduction to GUI Development
- 5.2 Using Windows Forms
- 5.3 Creating GUI Applications with WinForms
- 5.4 Event Handling in WinForms

#### **Database Connectivity**

- 6.1 Overview of Database Connectivity in IronPython
- 6.2 Connecting to Databases (SQL Server, SQLite, etc.)
- 6.3 Executing Queries
- 6.4 Handling Results

### Web Development with IronPython

7.1 Introduction to Web Development

- 7.2 Using IronPython with ASP.NET
- 7.3 Creating Web Applications
- 7.4 Handling HTTP Requests and Responses

#### **Testing and Debugging IronPython Code**

- 8.1 Overview of Testing Frameworks
- 8.2 Unit Testing IronPython Code
- 8.3 Debugging Techniques

#### Integrating IronPython with Other .NET Languages

- 9.1 Overview of Interoperability
- 9.2 Calling IronPython from C# or VB.NET
- 9.3 Passing Data Between IronPython and Other Languages

#### **Best Practices and Optimization**

- 10.1 Writing Clean and Maintainable Code
- 10.2 Performance Optimization Techniques
- 10.3 Documentation and Code Comments

#### **Real-world Projects and Case Studies**

- 11.1 Building Desktop Applications
- 11.2 Web Development Projects
- 11.3 Data Analysis and Visualization