

C# Training Syllabus

Developing Console Application

1. Entry point method - Main.
2. Command Line Parameters
3. Compiling and Building Projects

Language Basics

1. Variables and Data Types
2. String StringBuilder.
3. Boxing and Unboxing
4. Operators
5. Statements
6. Arrays and Strings
7. Procedures and Functions

Essentials of Object-Oriented Programming

1. Object and Class Definition
2. Understanding Identity, State, and Behavior
3. Using encapsulation to combine methods and data in a
4. single class
5. Inheritance and Polymorphism.

Working with Classes and Objects

1. Adding Variables and Methods
2. Properties and Indexers
3. Constructors and Destructors
4. Type Initialize
5. Extension Methods
6. Anonymous Types
7. Memory Management and Garbage Collection
8. Shared / Static Members
9. Method Overloading
10. Anonymous Methods
11. Partial Classes & Methods
12. Operator Overloading
13. Inner Classes
14. Attributes and their Usage

Inheritance, Interface and Polymorphism

1. Deriving classes
2. Calling base class constructor
3. Overriding Methods

4. Non-Inheritable Classes.
5. Abstract Class
6. Interface Inheritance
7. Namespace and Access Modifiers

Working With Collections

1. List and Dictionary
2. ArrayList and HashTable
3. Generic Classes & Methods
4. List and Dictionary
5. IEnumerable and IEnumerator

Exception Handling

1. Handling Exceptions using try and catch
2. Raising Exceptions using throw
3. Pre-defined Exception classes
4. Custom Exception classes
5. Using Statement

C# Features / General Features

1. Unsafe Code
2. fixed Keyword.
3. Operator Overloading.
4. Reflection
5. P-Invoke

Data Streams and Files

1. Byte Streams
2. Readers and Writers.
3. Binary Streams
4. Console and File I/O
5. Serialization & Deserialization

Working with Components / Assemblies

1. Creating a Simple .NET Framework Component
2. Private and Shared Assemblies
3. Signing Assemblies for Strong Names
4. Deploying .NET Assemblies in Global Assembly Cache

Multithreading

1. Introduction
2. Application Domains

3. Creating and Managing Threads
4. Thread Priority
5. Thread States
6. Thread Synchronization using Monitor and Mutex

Data Access using ADO.NET

1. Introduction to ADO.NET
2. Managed Providers
3. Working with Connection, Command,
4. DataReader and Transaction objects
5. Working with Prepared Statements and Stored
6. Procedures.
7. Connection Pooling and Multiple Active Result Sets
8. Working with DataSet
9. Adding, Deleting and Modifying records in a Dataset
10. Data Tables, Data Columns and DataRows ,
11. Constraints and DataRelations
12. Using DataView
13. Working with DataGridView.

Win Forms

1. Introduction
2. Controls
3. Menus and Context Menus
4. MenuStrip, ToolStrip.
5. Graphics and GDI
6. SDI and MDI Applications
7. Dialogbox (Modal and Modeless)
8. Form Inheritance
9. Working with Resource Files
10. Working with Settings
11. Other Misc topics.

XML

1. Introduction
2. XML-DOM
3. XmlDocument, XElement, XMLAttribute
4. Interoperating with DataSet
5. XmlDocument
6. XML TextReader / XML TextWriter
7. XPath.

Windows Services

1. Purpose and Advantage
2. Developing and Deploying
3. Debugging Windows Service

4. Sending Custom events

Packaging and Deployment

1. Compiled Deployment of ASP.NET application.
2. Types of Deployment Modules
3. Working with a Setup and Web Setup Project
4. Working with a Merge Module Project

Debugging and Tracing

1. Debug and Release Compilation
2. Debug and Trace Objects
3. Tracing Switches & Listeners
4. Debugging JavaScript from VS.NET
5. Debugging SQL-Server Stored Procedures.