



- CYU – Check Your Understanding
- LOTW – Learning On The Walls
- PPR – Participant Progress Report
- PTS – Post Training Support (Web)

# C#.NET

**Duration: 5 Days**

## INTRODUCTION/OVERVIEW OF .NET

- ❖ Introduction to .Net
- ❖ Platform for the .Net
- ❖ Drawbacks of Current Trend
- ❖ Net Framework – BCL & CLR | Key design goals
- ❖ CLR, CTS, MSIL & other tools.
- ❖ Multiple Language Interaction & support | Moving from Project to Assemblies...
- ❖ Security in .NET – CAS

## .NET FRAMEWORK [ADVANCED]

- ❖ Advantages/Disadvantages
- ❖ Features of .Net
- ❖ Assemblies in Detail
- ❖ GAC, Strong Names
- ❖ Language Interop
- ❖ Reflection

## .NET INSTALLATIONS/C#.NET

- ❖ .NET Versions – 1.1/2.0/3.0/3.5 Beta
- ❖ Visual Studio.NET 2003/2005/Orcas/2008
- ❖ Windows Vista – New Look
- ❖ Gadgets/SideBars/UAC – relation with .NET
- ❖ Hardware/Software Requirements
- ❖ FAQ's with detailed answers

## PROGRAMMING USING VISUAL C#.NET

- ❖ The start of the application
- ❖ C#.Net Program Design
- ❖ Variables and types
- ❖ Value types and reference types (CTS)
- ❖ Strings and arrays
- ❖ The Console class
- ❖ String formatting
- ❖ Statements and flows
- ❖ Programming Structures
- ❖ Command-line arguments
- ❖ VS.NET to Create C#.NET Apps
- ❖ C# 3.0/3.5 features – Implicit types , Extention Methods and more

## INTRODUCTION TO WINDOWS FORMS – I

- ❖ Windows forms library – WinForms
- ❖ Layout Enhancements
- ❖ Forms and controls – Hierarchy
- ❖ Creating simple GUI by hand
- ❖ Event handling
- ❖ Basic controls
- ❖ Windows forms – buttons, check boxes, radio buttons, panels, group boxes, list boxes, picture boxes...

## WINDOWS FORMS – II

- ❖ Menus
- ❖ Built-in dialog boxes and printing
- ❖ Extender Controls
- ❖ ToolStrips, StatusStrips and progress bars



- CYU – Check Your Understanding
- LOTW – Learning On The Walls
- PPR – Participant Progress Report
- PTS – Post Training Support (Web)

- ❖ A new MDI forms strategy
- ❖ Inheritance with forms
- ❖ New Controls – Web Browser, Property Grid etc

#### OBJECT ORIENTED CONCEPTS (ADVANCED)

- ❖ Accessibility levels, specifiers
- ❖ Constructors
- ❖ Method overloading
- ❖ Class (static) variables & methods
- ❖ Object destruction
- ❖ 'ref' and 'out' parameters
- ❖ Constant values
- ❖ Enumerations
- ❖ Inheritance and Polymorphism
- ❖ The root of all classes
- ❖ Creating derived classes
- ❖ Method overriding and hiding
- ❖ Polymorphism and virtual functions
- ❖ Casting objects
- ❖ Abstract classes
- ❖ Sealed classes
- ❖ Static classes

#### ERROR HANDLING

- ❖ Unstructured error handling support
- ❖ Structured error handling
- ❖ Error categories
- ❖ Debugging the application
- ❖ Debug and Trace classes

#### ADO.NET COMPONENTS

- ❖ Connected and disconnected environment
- ❖ ADO.NET object model
- ❖ Data sources, providers and connections
- ❖ Commands and data readers
- ❖ Data sets and data adaptors
- ❖ Data tables, rows and columns
- ❖ Constraints and relations
- ❖ Data-centric applications – New ADO.Net Hierarchy

#### LIVE CASE STUDY AND IMPLEMENTATION OF ADO.NET IN N-TIER

- ❖ Client Server Basics
- ❖ N-Tier – Classical and New
- ❖ N-Tier importance w.r.t other .Net technologies
- ❖ Build User Interface Layer – importance
- ❖ Business Layer in N-Tier – advantages & disadvantages
- ❖ Data Access Layer – Generic/Specific Advantages
- ❖ N-Tier DataBase Application
- ❖ SQLHelper, CodeSmith etc tools awareness

#### XML

- ❖ XML Basics – Importance in Today's world
- ❖ XML designers/support in VS.NET
- ❖ XML Derived Technologies – XSD ,XSL , SOAP ,WSDL



- CYU – Check Your Understanding
- LOTW – Learning On The Walls
- PPR – Participant Progress Report
- PTS – Post Training Support (Web)

#### XML IN .NET

- ❖ System.Xml Namespace
- ❖ Stream Model XML
- ❖ XML DOM
- ❖ XmlTextReader, TextWriter
- ❖ XmlTextReader, TextWriter XmlDocument/ XmlDataDocumentClasses
- ❖ Dom Objects – XmlNode/XMLNodeList
- ❖ XPATH- Query Language for XML
- ❖ DOM – Navigation & Access Case Studies

#### CREATING CUSTOM WINDOWS CONTROLS

- ❖ About user – defined controls
- ❖ Understanding the control class with Container
- ❖ Add Properties/Methods/Events to Control
- ❖ Pack & use control in other windows applications
- ❖ Create & implement a windows control

#### WINDOWS SERVICES

- ❖ Understanding services
- ❖ Creating windows services
- ❖ Setting properties
- ❖ Compile, run & install services
- ❖ Event log services

#### CRYSTAL REPORTS

- ❖ Reporting Need in the application
- ❖ Crystal Reports – Reporting Tool
- ❖ Different Versions of Crystal Reports
- ❖ Developing a Crystal Report
- ❖ Different ways to Invoke/Deploy Crystal Reports

#### APPLICATION DEPLOYMENT

- ❖ Packaging Code
- ❖ ClickOnce Deployment
- ❖ Configuring the .Net framework
- ❖ Deploying the application in Web Server
- ❖ Deployment – other methods