

# **.Net Training**

## **Module 1: 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

## **Module 2: 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 , Extension Methods and more

## **Module 3: 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...

## Module 4: Windows Forms – II

- Menus
- Built-in dialog boxes and printing
- Extender Controls
- Tool Strips, Status Strips and progress bars
- A new MDI forms strategy
- Inheritance with forms
- New Controls – Web Browser, Property Grid etc

## Module 5: Object Oriented Concepts (Basic)

- Classes & objects
- Abstract & override methods
- Creating and using your own classes | Data members and member methods | Instantiate an object
- This keyword
- Properties – Read Only Write Only...
- Build process using windows class library | Generate classes for other clients
- How to use classes as part of project
- 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

## **Module 6: Error Handling**

- Unstructured error handling support
- Structured error handling
- Error categories
- Debugging the application
- Debug and Trace classes
- Code Optimization
- Testing and strategies

## **Module 7: Data Sources And .Net Data Providers**

- Connecting to a data source
- SQL Server .NET data provider
- OLE-DB .NET data provider
- Connections and connection strings
- SQL-Server integrated security
- Connection pooling
- ADO.NET exceptions

## **Module 8: Accessing Data In The Connected Environment**

- Commands
- Creating and executing commands
- Reading data using a data reader
- Batch queries & single result queries
- Parameterized queries (input & output parameters)
- Adding, editing and deleting data
- Stored procedures

## **Module 9: Accessing Data In Disconnected Environment**

- Why using a disconnected environment?
- Dataset and Data adapter features
- Filling data sets using data adapters
- Read data using data tables, rows and columns
- Batch queries and data sets
- Visual Studio Data Menu & tools
- DataSet Navigation
- DataSet Functionality

- DataSet Optimistic Concurrency

## **Module 10: Sorting, Searching And Filtering**

- Searching in data sets
- Find on primary keys
- Searching on any column
- Searching on row state
- Wildcard searches
- Sorting and filtering using data views
- Searching in a data view

## **Module 11: XML**

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

## **Module 12: 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

## **Module 13: 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

## **Module 14: Windows Services\***

- Understanding services

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

### **Module 15: 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

### **Module 16: Application Deployment**

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

### **Module 17: Introduction of .NET**

- Introduction of .NET 4.5 Framework
- CLR
- CTS
- MSIL
- Garbage Collection

### **Module 18: Introduction to Windows Programming using C#**

- Windows Programming
- Windows Controls
- Common Controls
- Container Controls
- Menus and Toolbars
- Printing
- Dialogs
- Deploying Windows Application
- Deployment Overview

## **Module 19: ASP .NET Controls and Graphics**

- Introduction to ASP.NET
- ASP.Net Web Server Controls
- ASP.Net Page Life Cycle
- User Controls in ASP.Net
- Navigation Control
- Validation Control
- Login Controls
- Dynamic Graphics
- Basic Drawing
- Drawing a custom image
- Placing custom images inside Web Pages
- Image Format and Quality

## **Module 20: Master and Content Pages in ASP.NET**

- Creating Master and Content Pages
- Simple Master Page, Netsed Master Page
- Configuring Master Page Creating Themes
- Applying Themes

## **Module 21: State Management in ASP.NET**

- ASP.Net State Management
- Using View State
- Session state and application state
- Using cookies and URL encoding
- ASP.Net Web Application Security
- Authentication
- Authorization
- Impersonation
- ASP.Net provider model
- Caching
- Output Caching
- Data Caching

## **Module 22: Cascading Style Sheet (CSS)**

- Introduction of Cascading Style Sheet

- Working with CSS
- Types of Style Sheet

### **Module 23: SQL**

- Components of SQL
- Basic SQL Commands
- Triggers and Views
- ADO.Net
- Database Connectivity
- Data Binding
- Data bound controls

### **Module 24: Basics of Networking**

- Networking overview
- Networking programming option
- Webclient
- Web request and Web response
- Toplistener and Topclients

### **Module 25: LINQ**

- Introduction of LINQ
- LINQ Queries
- Standard Query operators
- LINQ to ADO.NET
- Lambda Expressions
- LINQ to XML

### **Module 26: AJAX Technology**

- Introduction of AJAX
- AJAX Server Controls
- Creating AJAX Application using ASP.NET
- ASP.NET AJAX Controls Toolkit

### **Module 27: jQuery**

- Introduction to jQuery
- jQuery UI Library
- Working of jQuery
- Functions used in jQuery

### **Module 28: Working with MVC**

- Introduction of MS.Net MVC Framework
- MVC Architecture
- How to start an ASP.NET MVC application
- The folders and files for a new MVC application
- Working with Views
- Working with controls

## **Module 29: Web Services**

- Web Services and Deployment
- Introduction to WCF, WPF and WF
- Creating a new WCF Service
- Using on click deployment
- Creating Web API Service