

PRO IT .NET Online Training Course Content

C# NET Course Content

C#.Net Training Course Objective

- Learn the fundamentals of C# programming in Visual Studio.
- Using .Net Framework
- Working with variables, data types
- Work with standard programming skills
- Exception Handling in C#
- Object oriented programming in C#
- Object oriented techniques
- Working with Arrays
- Create Generic classes and methods.
- Collections in C#
- Generate and test your own classes using the Class Designer and Object Test Bench tools.
- Use delegate types to provide flexibility and type safety.
- Use anonymous types, lambda expressions, extension methods, object initializers, and implicit type declarations

C#.Net Training Course Duration

- Normal Track 40 Working days, daily one and half hours
- Fast Track 30 Working days, daily two hours

C#.NET Training Course Overview

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

Visual C#.Net Language

- Advantages/Disadvantages
- Why C#/ Why Not C#
- Where does C# Fit in
- C, C++ to Visual C#
- Features of C#
- .NET Namespaces

.Net Installations/C#.Net

- .NET Versions – 1.1/2.0/3.0/3.5 Beta
- Visual Studio.NET 2003/2005/Orcas/2008/2010/2012/2013/2015
- 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
- A new MDI forms strategy
- Inheritance with forms
- New Controls – Web Browser, Property Grid etc

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

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

Object Oriented Concepts (Implementation Oriented)

- Case Studies
- Class Diagram in VS.Net

Error Handling

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

Ado.Net 1.1/2.0/Linq

- History and background
- From DAO to ADO.NET
- ADO.NET LINQ
- ADO.NET design goals
- The ADO.NET architecture and its components
- ADO.NET in relation to the other .NET tools
- DataSet in RealTime Scenarios

Ado.Net Components

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

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

Accessing Data In The Connected Environment

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

Accessing Data In Disconnected Environment

- Why using a disconnected environment?
- DataSet and DataAdapter 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

Sorting, Searching And Filtering

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

XML

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

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

.Net Remoting

- About Distributed Applications
- COM/DCOM in Distributed Environment
- .NET Remoting – New distributed environment
- Advantages & Disadvantages
- Remoting – Web Services comparisons
- MBR, MBV
- Channels
- Formatters
- Programming Model – Object Styles & Lifestyles
- Activation

RDLC Reports*

- Reporting Need in the application
- RDLC Reports – Reporting Tool
- Developing a RDLC Report

Application Deployment

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

ASP.Net Course Content

ASP.NET Training Course Objective

- Introduction to web technologies

- Web Forms Architecture
- ASP.Net and HTTP
- Web application developing using Visual Studio
- State Management and Web Applications
- ASP.Net Server-side controls
- Caching in ASP.Net
- ASP.Net application configuration
- Debugging, Diagnostics of application
- Connectivity with Database using ADO.Net/Entity Framework
- Data Access Controls
- Personalization and Security
- Introduction to Web Services
- Introduction to WCF

ASP.NET Training Course Overview

Introduction To Web Applications [Prerequisites]

- Types of Applications – Web, Desktop & Mobile Applications
- Web applications with Web Server
- Web Server role, about IIS, APACHE, and CASSINI
- Web Browsers, Web Support Languages
- Understanding http, TCP/IP, LAN, WAN & O/S role in web development
- Why Scripting & its importance
- Client-Side & Server-Side Scripting

OVERVIEW OF .NET (ASP.NET)

- Intro to .NET
- Drawbacks of Current Trend
- .NET Framework
- Key Design Goals
- CLR, CTS, MSIL, & Other Tools
- Multiple Language Interaction & Support
- Moving from Project to Assemblies...
- Security Services and environment
- Vista & IIS 6.0/7.0 & their requirements
- Installing & Configuring VS.NET/.NET 2.0/3.0/3.5

ACTIVE SERVER PAGES .NET ROLE

- Shifting from ASP to ASP.Net, Asp.net to web 2.0 (new)
- ASP.Net as Framework, Namespaces
- ASP.Net – New Scenario in development process with IDE – VS.NET

- Web Pages to Web Forms, HTML – ASP.NET, State management- an Important Objective
- Understanding the ASP.NET Execution Scenario
- C#.Net role in ASP.NET Development
- ASP.NET/C#.Net – the Industry approach
- HTML, HTML Controls, ASP.NET Controls
- Client-side & Server-side Controls
- Consuming HTML Client/Server Controls in WebForms
- Consuming ASP.Net Controls in WebForms
- Understanding the Rendering Nature of Controls Developing a Simple Startup Application

ASP.NET WEB FORMS – THE NEW TECHNOLOGY(BEGINNING)

- Introducing Web Forms, Worker process
- Working with Server Controls
- Applying Styles to Controls, Themes, Skins etc

FORM

- Page Directives and its use
- Separating Code & Design
- New Code behind Techniques
- Implementing ASP.NET Server Controls
- Types of ASP.NET & their need/render
- Intrinsic – Validation – Bound – DataSource
- Navigation – Login – Web Parts & AJAX.-as building blocks Asp.net.

WEB FORMS – INTRODUCTION TO AJAX INPUT VALIDATION

- Validating Form with Validation Controls of Asp.net
- Using RequiredFieldvalidator control
- Using CompareValidator Control Using RangeValidator Control
- Using CustomValidator control
- Create Server-side / Client-side functions for – CustomValidator Control
- Group Validations & avoiding Validations.
- Finally – Client Targets & ValidationSummary control

ADO.NET I – DATABASE SERVICES (V1.1/2.0/3.5)

- XML, XML to HTML, XML & Databases
- XML Schema Definition Tool
- Overview of ADO.NET/ XML Support in .NET
- Connect/Insert/Update/Delete,Query data -using ADO.NET
- Retrieve data with datasets
- Data Adapters, Understanding Data tables

- Build Data table programmatically
- Filter and sort Data table, Data Relations
- ADO.NET LINQ

ADO.NET – II

- Parameters with Command Object
- Stored Procedures with ADO.NET using –output parameters
- Develop a Registration form using ADO

PRESENTING DATA USING ASP.NET BOUND CONTROLS (USING VB.NET/C#)

- ASP.Net bound controls
- DataSource Controls
- Repeater & its uses.
- DataBound and DataAware Controls
- Bind data to Dropdownlist Control
- Datalist control
- GridView & its importance in Development
- GridView(Basic) – simple uses
- GridView (Advanced) –Runtime Fields, Empty DataRows,
- FormView & DetailsView
- ListView

ASP.NET ERROR HANDLING & DEBUG.

- Error Handling & .NET Runtime
- Avoid Errors before they occur
- Structured Error Handling
- Catching General Exceptions
- Throwing Exceptions
- Custom Exceptions

USER CONTROLS

- Creating User Controls
- Adding member to user controls.
- Registering User Controls
- Properties & Methods
- Dynamically loading user controls
- Master Pages

CONFIGURING ASP.NET APPLICATION

- Web Application configuration-Advantages.

- New Configuration Model, ASP.NET Conf Tool
- Web Application Machine Configuration
- Global Assembly Cache, Strong Names VS2005.
- Working with Assembly Info
- Web.Config,
- Process Model –System Configuration.

ASP.NET WEB APPLICATIONS

- About Session & Application object
- Comparison between Session & Application
- Using the Global.asax file
- Managing Application State
- Http Handlers
- Application & Session Variables
- Application & Session Events

CACHE SERVICES

- Caching Overview
- Advantages of Caching
- Page Output Caching
- Page Data Caching
- Fragment Caching

SECURITY

- Security Overview
- Authentication & Authorization
- Windows-based Authentication
- Passport Authentication
- Forms-based Authentication
- Authorizing Users and Roles
- User Account Impersonation

ASP.NET XML WEB SERVICES

- Introducing XML Web Services
- Differences Between DCOM / Remoting / Web Services
- Asp.net Webservice.
- Writing a Simple Web Service
- Xml web services stack, SOAP,WSDL,UDDI,Sync an
- Using Data in Web Services