

## Course Content - .NET

*Mission- To bring in Continuous improvement and achieve excellent customer satisfaction at all levels of software training and development, through its modular and systematic approach in accomplishing our goal of becoming a global giant.*

### Introduction to .NET

- Understanding .NET Technology
- .NET Applications
- .NET Programming Languages

### Understanding .Net Framework

- Need of Framework
- Versions of Framework
- Features of Framework
- Components of Framework
- Languages under .Net
- Understanding CLR, CTS, CLS
- Understanding Code execution Process
- Namespaces and Assemblies

### VB .NET (Console Application)

- Working with Visual Studio IDE
- Building VB.NET Applications in Visual Studio
- Building VB.NET Applications Using Notepad
- Importing Namespaces
- Variables, Data Types, Boxing & Unboxing
- Functions, Arrays, Structures, Enums
- OOPS Concept in VB .NET
- Properties, Methods, Constructor, Destructor
- Inheritance, Polymorphism, Interfaces
- Delegates, Collections, Generics, Multithreading
- Exception Handling, File Handling

### VB .NET (Windows Application)

- Introduction about window Applications
- Common window controls
- Advanced Controls, Dialog Controls
- Creating window Applications Data Controls
- ADO.Net Programming using SQL-Server
- MDI Applications
- Creating and using Crystal Reports
- Creating Setup and Deployment
- Assemblies

### C# .NET (Console Application)

- o Working with Visual Studio IDE
- Building C# .NET Applications in Visual Studio
- Building C# .NET Applications Using Notepad
- o Importing Namespaces
- o Variables, Data Types, Boxing & Unboxing
- o Functions, Arrays, Structures, Enums
- o OOPS Concept in C# .NET
- o Properties, Methods, Constructor, Destructor
- o Inheritance, Polymorphism, Interfaces
- o Delegates, Collections, Generics, Multithreading
- o Exception Handling, File Handling

### ASP .NET with C#

- o Introduction to ASP .NET
- o Client side and server Side Technologies
- o Creating website in IIS
- o HTML, CSS, Javascript
- o Standard, Navigation, Validation Controls
- o State Management Techniques
- o Skins and Themes, Master Page
- o Introduction to SQL Server
- o Creating Database, Tables
- o Inserting, Updating, Deleting Records
- o Joins, Stored Procedures, Triggers
- o ADO .NET Concept in ASP.NET
- o Data Controls, GridView, Repeater, DataList
- o Updating, Deleting, records from GridView
- o Creating and using Crystal Reports
- o Caching and Types of Caching
- o File Upload, Sending Mails
- o Security Techniques

## Advanced .NET

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### XML

- o Introduction
- o Difference between XML & HTML
- o Types of XML
- o DTD, XML Schema
- o XML Web Server Control
- o Converting Relational Data to XML
- o XML with CSS, XSLT, XHTML

### Web Services

- o Introduction
- o SOA, SOAP, WSDL
- o Creating Web Service
- o Web Methods
- o Testing Web service
- o Consuming Web Service
- o Creating Web Service Proxy

### Language Integrated Query (LINQ)

- o Introduction
- o Developing LINQ Query
- o LINQ to Arrays
- o LINQ to Objects
- o LINQ to XML
- o LINQ to Database, LINQ Designer

### ASP .NET AJAX

- o Introduction
- o Working with Ajax Server Controls
- o Creating Ajax enabled Websites and services
- o Introduction to Ajax toolkit.

### Windows Communication Foundation (WCF)

- o Introduction
- o WCF Features
- o Difference between Web Service and WCF
- o Understanding SOA
- o WCF Architecture
- o Contracts, Messages
- o Creating a WCF Service
  - Address, Bindings and Contracts
  - Consuming a WCF Service

### Window Workflow Foundation (WWF)

- Introduction
- Creating and executing Workflow Application
- Integrating workflow with WCF

### Windows Presentation Foundation (WPF)

- Introduction
- Programming with WPF
- Markup and Code-Behind
- WPF Layouts
- Creating WPF applications
- WPF Data Binding (MVVM)
- WPF User Control
- Templates in WPF
- WPF Commands, Routed Events
- Triggers, Creating Animations

### Silverlight

- Introduction
- Silverlight User Control
- Accessing Query String
- Executing Javascript from Silverlight
- Calling WCF service From Silverlight
- Insert update delete data from Silverlight
- Maintaining Sessions
- Wrapping a Workflow Service

### ASP .NET MVC

- Introduction
- MVC design pattern
- Advantages
- Creating models, Views and Controllers
- Working with SQL Server
- Adding Validation to the Model
- Validation Error UI within ASP.NET MVC
- Implementing Edit, Details, and Delete Views