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★ About this Course

The goal of this course is to provide application developers easy and complete understanding of the Microsoft® .NET using C#, VB.NET and ASP.NET. The course provides a series of walkthroughs & labs assignment which introduce and explain .NET features that are used to code, debug, tune and deploy both Windows and Web applications.

★ Course Objectives

At the end of the course, students will be able to:

- List the major elements of the .NET Framework and explain how they fit into the .NET platform.
- Learning about all the features of VS.NET IDE.
- Explain the main concepts behind the common language runtime and use the features of the .NET Framework to create a simple to complex application.
- Have in-depth knowledge of the C# & VB.NET Language features
- Learn and implement concepts of Object Orientation. Create classes and interfaces that are functionally efficient and appropriate for given programming scenarios.
- Use the .NET Framework class library to efficiently create and manage strings, arrays, collections, and enumerators.
- To develop applications which are database intensive using ADO.NET.
- Use delegates and events to make an event-sender object signal the occurrence of an action to an event-receiver object.
- Read from and write to data streams and files. Serialize and deserialize an object graph.
- Developing Dynamic Web Applications using ASP.NET.
- Understand and use various State Management techniques like Cookies and Sessions.
- Provide Security (Authentication and Authorization) to a web based application.
- Develop internationalized multilingual applications using Globalization and Localization.
- To implement web 2.0 features using AJAX.
- Create distributed applications by means of Web Services and Remoting and WCF
- Developing applications using N-Tier architecture.

★ Prerequisites

Before joining the course students must have knowledge of any one programming language like "C" or any other programming language basics. It will help them in understanding the subject in better way. The seeker need not know object orientation as this will be thought from ground up.

★ Duration:

Module 1: It comprises of VB.NET, C# and Windows Programming – 9 Weeks

Module 2: It comprises of ASP.NET and Distributed Computing – 7 Weeks

★ Note:

A student can join both the modules simultaneously and complete the course in two months.

★ Instructors:

The team of trainers is headed by Mr. Sandeep Soni and Mr. Rahul Rampurkar who are founders of Deccansoft and are into training from 1997. Deccansoft is considered to be the best training center for .NET in Hyderabad and Secunderabad and credit goes to both these faculties and their teams.

Also they have taken innumerable number of corporate batches and thus have a very good understanding of the industry standards and requirements.

★ Syllabus Details

MS.NET Framework

- ▶ The .NET Framework - an Overview
- ▶ Architecture of .NET Framework
- ▶ Types of Applications which can be developed using MS.NET
- ▶ MSIL / Metadata and PE files.
- ▶ The Common Language Runtime (CLR)
- ▶ Common Type System (CTS)
- ▶ Common Language Specification (CLS)
- ▶ Types of JIT Compilers
- ▶ Security Manager
- ▶ MS.NET Memory Management / Garbage Collection
- ▶ MS.NET Base Classes Framework
- ▶ MS.NET Assemblies and Modules

VB.NET and C# Languages

- ▶ Developing Console Application
 - ▶ Entry point method - Main.
 - ▶ Command Line Parameters
 - ▶ Compiling and Building Projects

Language Basics

- ▶ Variables and Data Types
- ▶ String & StringBuilder.
- ▶ Boxing and Unboxing
- ▶ Operators
- ▶ Statements
- ▶ Arrays and Strings
- ▶ Procedures and Functions

Essentials of Object-Oriented Programming

- ▶ Object and Class Definition
- ▶ Understanding Identity, State, and Behavior
- ▶ Using encapsulation to combine methods and data in a Single class
- ▶ Inheritance and Polymorphism.

Working with Classes and Objects

- ▶ Adding Variables and Methods
- ▶ Properties and Indexers
- ▶ Constructors and Destructors
- ▶ Type Initialize
- ▶ Extension Methods
- ▶ Anonymous Types
- ▶ Memory Management and Garbage Collection
- ▶ Shared / Static Members
- ▶ Method Overloading
- ▶ Anonymous Methods Partial Classes & Methods
- ▶ Operator Overloading
- ▶ Inner Classes
- ▶ Attributes and their Usage

Inheritance, Interface and Polymorphism

- ▶ Deriving classes
- ▶ Calling base class constructor
- ▶ Overriding Methods
- ▶ Non-Inheritable Classes.
- ▶ Abstract Class
- ▶ Interface Inheritance
- ▶ Namespace and Access Modifiers

Advance Language Features and Base Class API

Working With Collections

- ▶ List and Dictionary
- ▶ ArrayList and HashTable
- ▶ Generic Classes & Methods
- ▶ List of Directory
- ▶ Enumerable and IEnumerator

Exception Handling

- ▶ Handling Exceptions using try and catch
- ▶ Raising Exceptions using throw
- ▶ Pre-defined Exception classes
- ▶ Custom Exception classes
- ▶ Using Statement

Inheritance, Interface and Polymorphism

- ▶ Deriving classes
- ▶ Calling base class constructor
- ▶ Overriding Methods
- ▶ Non-Inheritable Classes.
- ▶ Abstract Class

C# Features / General Features

- ▶ UnSafe Code
- ▶ fixed Keyword.
- ▶ Operator Overloading.
- ▶ Reflection
- ▶ P-Invoke

Data Streams and Files

- ▶ Byte Streams
- ▶ Readers and Writers.
- ▶ Binary Streams
- ▶ Console and File I/O
- ▶ Serialization & Deserialization

Working with Components / Assemblies

- ▶ Creating a Simple .NET Framework Component
- ▶ Private and Shared Assemblies
- ▶ Signing Assemblies for Strong Names
- ▶ Deploying .NET Assemblies in Global Assembly Cache

Multithreading

- ▶ Introduction
- ▶ Application Domains
- ▶ Creating and Managing Threads
- ▶ Thread Priority
- ▶ Thread States
- ▶ Thread Synchronization using Monitor and Mutex

Data Access using ADO.NET

- ▶ Introduction to ADO.NET
- ▶ Managed Providers
- ▶ Working with Connection, Command, DataReader and Transaction objects
- ▶ Working with Prepared Statements and Stored Procedures
- ▶ Connection Pooling and Multiple Active Result Sets
- ▶ Working with DataSet
- ▶ Adding, Deleting and Modifying records in a Dataset
- ▶ Data Tables, Data Columns and DataRows , Constraints and
- ▶ DataRelations
- ▶ Using DataView
- ▶ Working with DataGridView

WinForms

- ▶ Introduction
- ▶ Controls
- ▶ Menus and Context Menus
- ▶ MenuStrip, ToolStrip.
- ▶ Graphics and GDI
- ▶ SDI and MDI Applications
- ▶ Dialogbox (Modal and Modeless)
- ▶ Form Inheritance
- ▶ Working with Resource Files
- ▶ Working with Settings
- ▶ Other Misc topics.

XML

- ▶ Introduction
- ▶ XML-DOM
- ▶ XmlDocument, XmlElement, XmlAttribute
- ▶ Interoperating with DataSet
- ▶ XmlDocument
- ▶ XML TextReader / XML TextWriter
- ▶ Xpath.

Windows Services

- ▶ Purpose and Advantage
- ▶ Developing and Deploying
- ▶ Debugging Windows Service
- ▶ Sending Custom events

Packaging and Deployment

- ▶ Compiled Deployment of ASP.NET application.
- ▶ Types of Deployment Modules
- ▶ Working with a Setup and Web Setup Project
- ▶ Working with a Merge Module Project

Debugging and Tracing

- ▶ Debug and Release Compilation
- ▶ Debug and Trace Objects
- ▶ Tracing Switches & Listeners
- ▶ Debugging JavaScript from VS.NET
- ▶ Debugging SQL-Server Stored Procedures.

Developing N-Tier Architecture Application Using SQLHelper, DAO, Business Object, Data Objects and Presentation Tier

ASP.NET

Basic of HTML and JavaScript

Introduction to ASP

- ▶ ASP Architecture
- ▶ ASP Objects
- ▶ Request and Response Structure
- ▶ Forms and Querystring

Overview

- ▶ ASP.NET Architecture
- ▶ Virtual WebServer
- ▶ New Features over ASP and ASP.NET 1.1
- ▶ Event Handling

Web Forms

- ▶ Introduction
- ▶ Advantages
- ▶ Comparison with HTML Form
- ▶ Page Processing States
- ▶ Event Model
- ▶ View State Management
- ▶ Cross-Page Postback
- ▶ HTML Server Controls
- ▶ Standard ASP.NET Server Controls
- ▶ Basic Controls
- ▶ Validation Controls
- ▶ Web User Controls

Master Pages & UserControl

- ▶ URL Rebasing in a Master Page
- ▶ Accessing a Master Page from Code
- ▶ Nesting Master Pages
- ▶ Master and Content Pages

Applying Themes and Styles to Controls

- ▶ Working with CSS
- ▶ Using Themes to Customize a Site
- ▶ Named Skins within a Theme
- ▶ Server-side Styles using Themes
- ▶ Contents of a Theme and Skin
- ▶ Themes and Profiles

ASP.NET State Management

- ▶ Static / Shared Members
- ▶ ViewState Object
- ▶ Cookies
- ▶ Session Management
- ▶ Application State
- ▶ HttpContext

ASP Intrinsic Objects

- ▶ Request and Response
- ▶ Session Objects
- ▶ Application Objects
- ▶ Server and Context

ASP.NET Web Application

- ▶ Creating Virtual Directories
- ▶ Global.asax & Managing Application Events
- ▶ HttpApplication Instance
- ▶ HTTP Handlers and creating Custom Handler
- ▶ URL Redirection

Data Access Controls

- ▶ Data Binding Server Controls
- ▶ SqlDataSource, ObjectDataSource
- ▶ GridView
- ▶ DetailsView and FormView
- ▶ Data List and Repeater
- ▶ ListView

Caching

- ▶ Overview
- ▶ Page Output Caching
- ▶ CacheProfile
- ▶ Page Fragment Caching
- ▶ Data Caching
- ▶ SQL Cache Invalidation
 - ▶ Notification-based Invalidation
 - ▶ Polling-based Invalidation
- ▶ Expiration Policies and Cache Dependencies

Configuration

- ▶ Configuration Overview
- ▶ Machine.Config and Web.Config
- ▶ Inheritance of Configuration Settings
- ▶ Configuration File Format
- ▶ URL Rewriting - (Programmatically and using config files)
- ▶ Custom Error Handling.

Trace Functionality

- ▶ Overview of Tracing
- ▶ Trace Information
- ▶ Page-Level Trace
- ▶ Application-Level Trace

Security

- ▶ Authentication & Authorization
- ▶ Windows Based Authentication
- ▶ Form Based Authentication
- ▶ Authorizing Users and Roles
- ▶ Impersonation
- ▶ Using Login Controls
- ▶ ASP.NET Membership and Roles
- ▶ Securing Non-ASP.NET files

Globalization and Localization

- ▶ Request and Response Encoding
- ▶ Local and Global Resources
- ▶ Implicit Expressions to Local Resources
- ▶ Explicit Expressions to Local Resources
- ▶ Programmatic Access to Global Resources
- ▶ Localizing Static Content
- ▶ Storing Language Preferences
- ▶ Right to Left Mirroring
- ▶ Culture specific formatting

Personalizing Using Web Parts

- ▶ Webpart Controls
- ▶ Editing Webparts
- ▶ Personalizing

AJAX.NET

- ▶ Architecture
- ▶ Working with AJAX Pro
- ▶ Using AJAX.NET Controls
 - o Accordion
 - o Calendar
 - o CascadingDropDown
 - o CollapsiblePanel
 - o FilteredTextBox
 - o NumericUpDown
 - o ModalPopup
 - o PopupControl

Distributed Application Development

Introduction

- ▶ Comparison between 2-tier and 3-tier
- ▶ Limitations of SOCKET communication
- ▶ Stub / Proxy Architecture
- ▶ Comparison between DCOM / CORBA & RMI
- ▶ Protocol for communication.
- ▶ Serialization and Marshalling.

Web Services

- ▶ Architecture and Advantage.
- ▶ SOAP Significance.
- ▶ BuArchitecture and Advantage.
- ▶ ilding Services & Hosting Services
- ▶ Using WSDL to Build Proxy for clients
- ▶ Setting up a 3-Tier Application using Web Service.

Remoting

- ▶ Architecture
- ▶ Advantages over Web Services
- ▶ Channel Types
- ▶ Server activated : Singleton / Single Call
- ▶ Using Remoting Object in Web Application
- ▶ Client activated

★ Benefits of Availing our courses:

1. Participants will go through real time training as per current standard industry norms.
2. We take you very close to the actual development, which enables the participants to implement in a proper way, when on job.
3. The course modules help the participants to work on real time projects so as to implement whatever is learnt.
4. No need to increase the burden by buying books for reference, as all the course content handouts are prepared after in-depth understanding of the subject, which can be also used for quick reference.
5. We believe in permanent relationship, so our technical experts would be available for to provide you with the required guidance through our live support.
6. Trainers who can outline the subject matter are many but we believe to train the students to have ever lasting expertise on the subject matter.
7. Training with us will provide you with the skills and knowledge necessary for achieving confidence so that the individual can be productive from day one.
8. Our courses are designed such that more comprehensive professional and more practical oriented training.

Deccansoft believes in providing value based training and inline to our corporate vision of quality training Deccansoft will refund the money to students who are not satisfied with the training provided with in one week of starting the classroom training session.

★ For more details please contact us at enquiry@deccansoft.com or support@bestdotnettraining.com

★ Corporate Enquiry

The Above Course Content can be customized for corporate trainings. Contact Corporate Course Coordinator manjula.sk@deccansoft.com