

# TECHNOLOGY LEARNING CENTER

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## 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 Duration**

- 45 Working days, daily one and half hours

## **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
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## 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
- AJAX(ATLAS) importance in Web applications
- The need for AJAX & the Solution

## 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



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## 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



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- 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
- DataGrid(1.1/2.0) Control
- GridView & its importance in Development
- GridView(Basic) – simple uses
- GridView (Advanced) –Runtime Fields, Empty DataRows, NTier ...
- FormView & DetailsView
- ListView

## AJAX ( ATLAS )

- Introduction to Microsoft AJAX.(Code name ATLAS)
- XML Http object
- Programming with XML HTTP Object
- Advantages and Disadvantages of AJAX.
- Features of AJAX.
- MS Implementation of AJAX



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## ASP.NET ERROR HANDLING & DEBUG.

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

## 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 Confn Tool
- Web Application Machine Configuration
- Global Assembly Cache, Strong Names VS2005.
- Working with Assembly Info
- Web.Config, Machine.Config
- Process Model –System Configuration.



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## 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
- Comparing with Application & Session var's
- Page Output Caching
- Page Data Caching
- Fragment Caching

## SECURITY

- Security Overview
- Authentication & Authorization
- Windows-based Authentication
- Passport Authentication.(WebServices)
- Forms-based Authentication
- Memberships
- Authorizing Users and Roles
- User Account Impersonation



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## DEPLOYMENT

- Deploying ASP.NET Application

## ASP.NET XML WEB SERVICES

- Introducing XML Web Services
- Differences Between DCOM / Remoting / Web Services
- Asp.net Webservices.
- Writing a Simple Web Service
- Xml web services stack, SOAP,WSDL,UDDI,Sync an
- Async calls
- Web Service Type Marshalling
- Using Data in Web Services
- Using Objects and Intrinsic
- HTML Pattern Matching
- WCF

## WEBPARTS

- New concept in Web Apps.
- Advantages and Disadvantages.
- Predefined/ user defined controls with webparts.

## WINDOWS VISTA-NEW FEATURES

- Gadgets/side bars.
- Office 2007
- VS to VS.net tools for office.

## MOBILE APPLICATIONS

- Mobile forms
- Mobile Environment – Today's Need.
- Needed Infrastructure

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- WAP, WML overview.
- MS Mobile Explorer.
- Open ware Simulators.
- Line smart phones and Pocket PC Applications.

## SMARTPHONE AND POCKET PC

- What is Smartphone / Pocket Pc?
- Application for smartphone / pocket pc
- Deploying / Run application in devices / Live

## VSTO – VS.NET

- What is VSTO?
- Programming developing managed addings for outlook.
- Advantages VSTO
- VSTO 2005 SE
- Runtime component.

