

# **ACCP 17.1 – SEMESTER 3**

## **BEGINNING ASP.NET**

Session 1 -Introduction to ASP.NET WebForms

# Objectives



- ASP and ASP.NET
- Web Form
- ASP.NET Application Development
- Working with Visual Studio 2005 IDE
- Configure ASP.NET Application with IIS
- Features of the New Web Environment

# Client-Side vs. Server-Side Scripting(1)

## *Static and Dynamic Web Pages*

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- A Web page is organized as **presentation layout** and **programming code**
- The layout is created using Hypertext Markup Language (HTML) tags
- Programming codes are created using scripting languages.
- Scripting can be either at the client-side or at the server-side.
- HTML tags, by themselves, can create only static Web pages
- JavaScript or VBScript can be used to create some extent of interactivity in Web pages.
- The codes created using JavaScript\VBScript run **only on the client machine** and hence are referred to as client-side scripting.
- Client-side code is generally used for **input validation**
- Web pages that have only client-side scripts do not provide database connectivity..



# Client-Side vs. Server-Side Scripting(2)

## Server-Side Scripting

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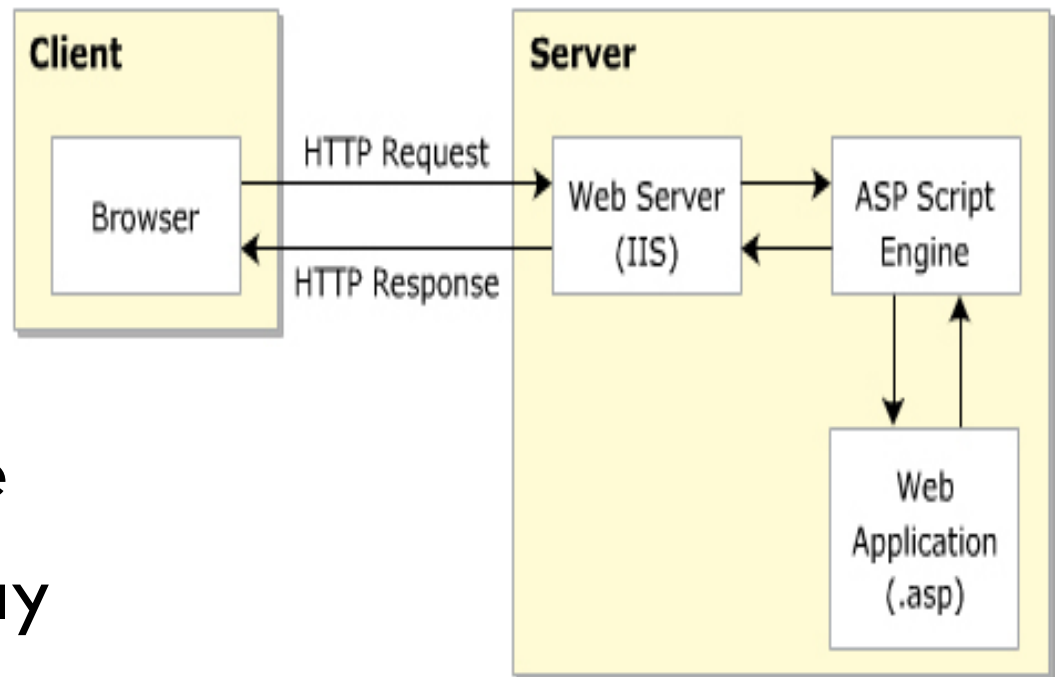
- Server side scripts can be written separately and attached to the HTML pages by providing the path of the script file in the HTML page.
- These scripts get compiled only on the server machine.
- **Example:**
  - Active Server Pages (ASP)
  - ColdFusion (CF)
  - Hypertext Preprocessor (PHP)
  - Server Side Includes (SSI)
  - Java Server Pages (JSP)
- The extension of ASP server-side script is .asp.

The image shows a web browser window with a registration form. The form has the title 'Registration form' and four text input fields for 'Name:', 'Address:', 'Phone Number:', and 'E-mail:'. A 'Submit' button is located below the input fields. The browser's status bar at the bottom indicates 'Done' and 'Local intranet'.

# Features of Active Server Pages

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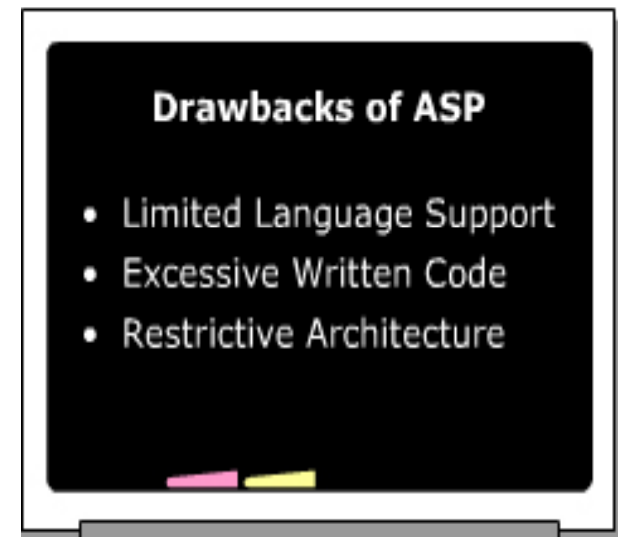
- ❑ Web page Interactivity
- ❑ Database Connectivity
- ❑ Hide source code
- ❑ Additional Display Support



# The drawbacks of ASP

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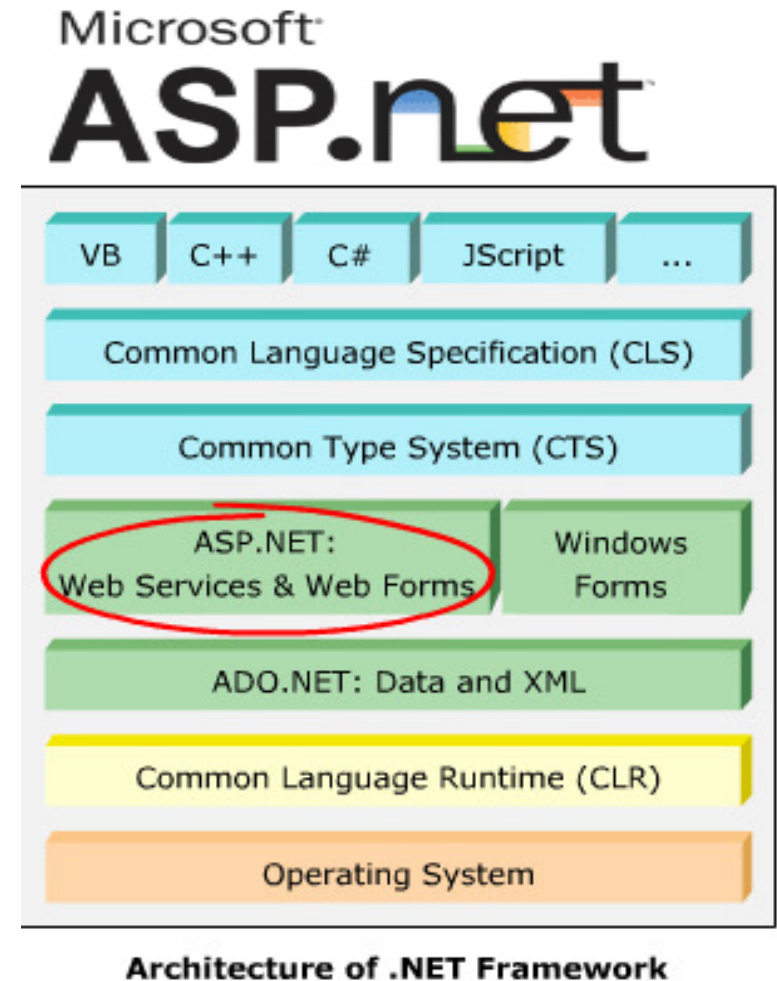
- ❑ Only supports **JScript** and **VBScript** for client-side scripting
- ❑ Excessive Written Code – No automatic generation of code
- ❑ Based on **Component Object Model (COM)** and **Win 32 API**.  
These technologies do not support modern distributed applications.



# ASP.NET and .NET Framework

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- ❑ Uses **CLR** to make powerful Web Application and XML Web Services
- ❑ ASP.NET server-side code can be written in any .NET compatible language (C# , VB.net , J#, etc.)



# Features of ASP.NET 2.0



- ❑ Simple Coding Model
- ❑ Multiple Language Options
- ❑ Dynamic Compilation
- ❑ Caching Functionality
- ❑ Web-Farm Session State
- ❑ Reliability



# Advantages of ASP.NET 2.0

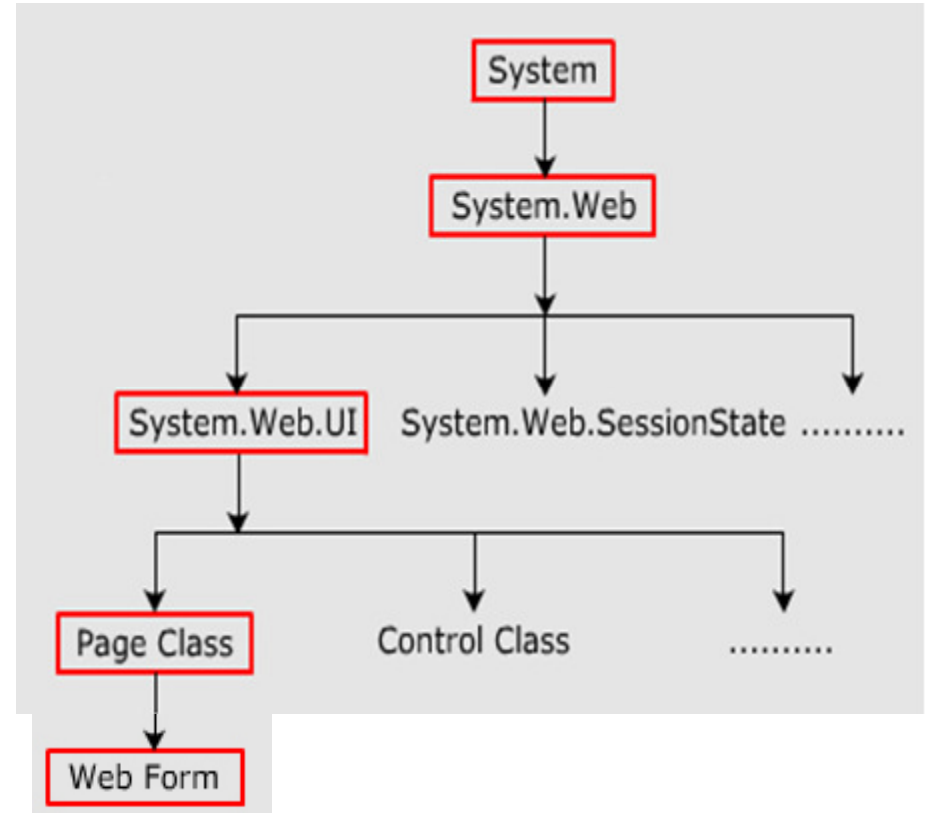
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- ❑ Improved Performance
- ❑ Power and Flexibility
- ❑ Manageability
- ❑ Scalability
- ❑ Customizability
- ❑ Customizability and Extensibility
- ❑ Security

# WebForms

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- ❑ Web Forms are part of ASP.NET and provide a page programming model or framework.
- ❑ They are similar to Windows Forms but accessible only through a Web browser.
- ❑ Web Forms can contain HTML code, client-side scripting in languages like JavaScript or VBScript, as well as the server-side application logic
- ❑ A Web Forms page is derived from the `System.Web.UI.Page` class.

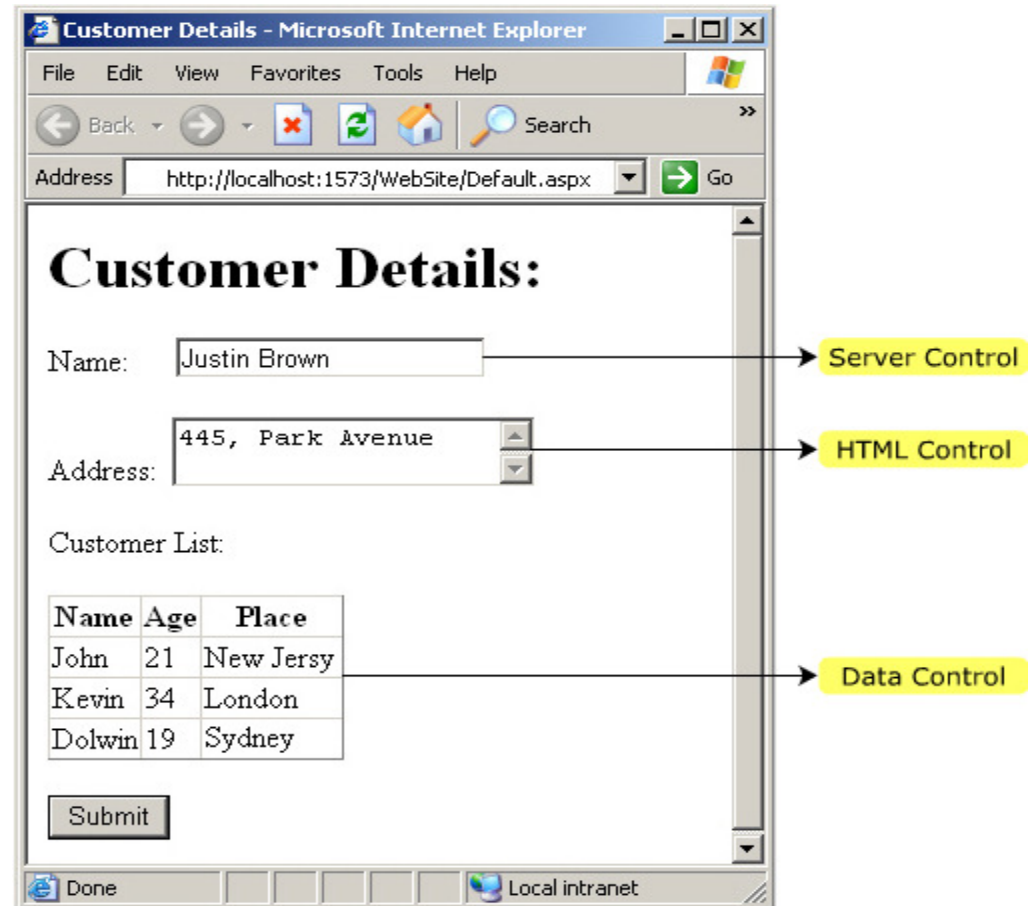


# Components of WebForms

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## □ Component Category

- ▣ Server Controls
- ▣ HTML Controls
- ▣ Data Controls

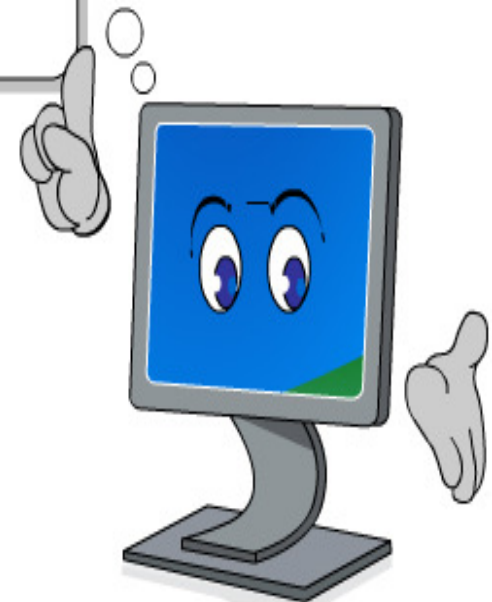


# Features of WebForms

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- Rendering
- Programming
- WYSIWYG
- Code Separation
- State Management
- Extensibility
- Additional Control

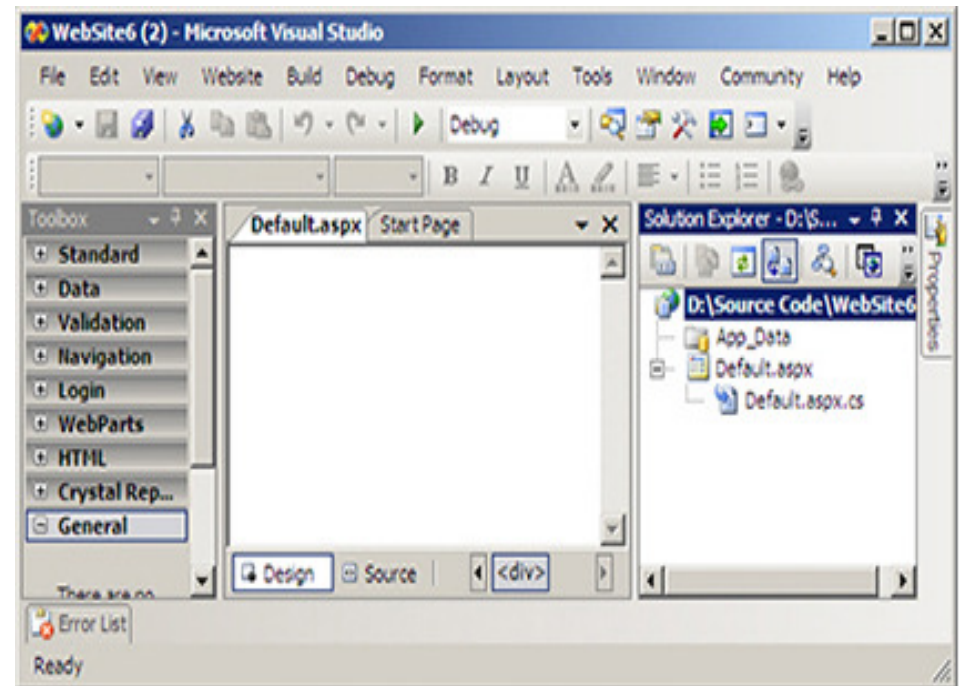
- ✓ Automatic Generation
- ✓ Language Flexibility
- ✓ Drag and Drop Functionality
- ✓ Separate Codes
- ✓ Additional Controls



# Visual Studio 2005 IDE for ASP.NET

## □ Advantages

- Easy Configuration
- Automatic File Compilation
- Flexible Iterative Web Development
- New Object and Method

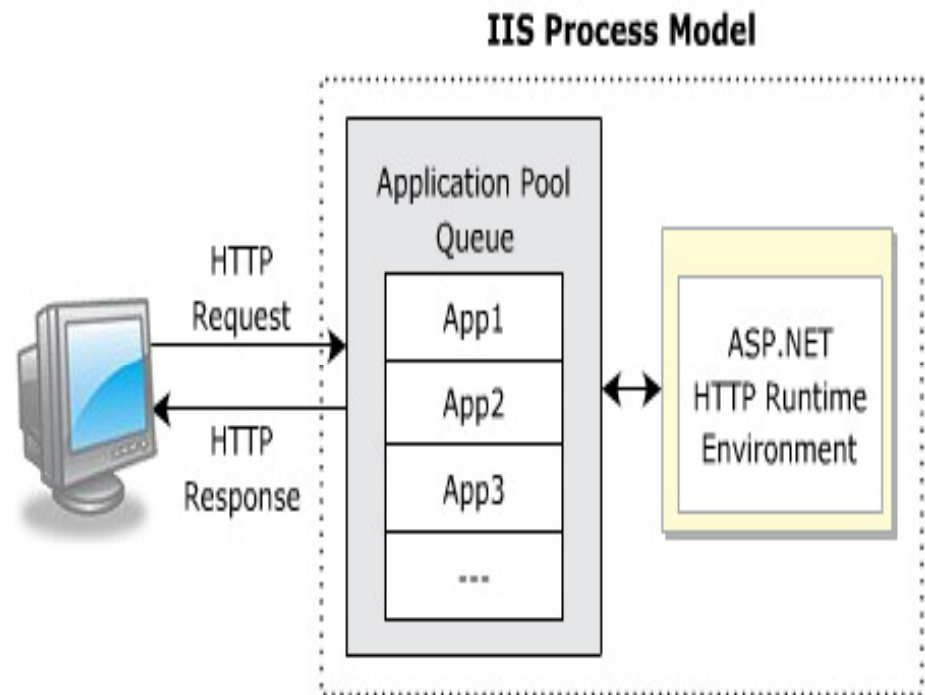


Visual Studio 2005 IDE

# Internet Information Services (IIS)

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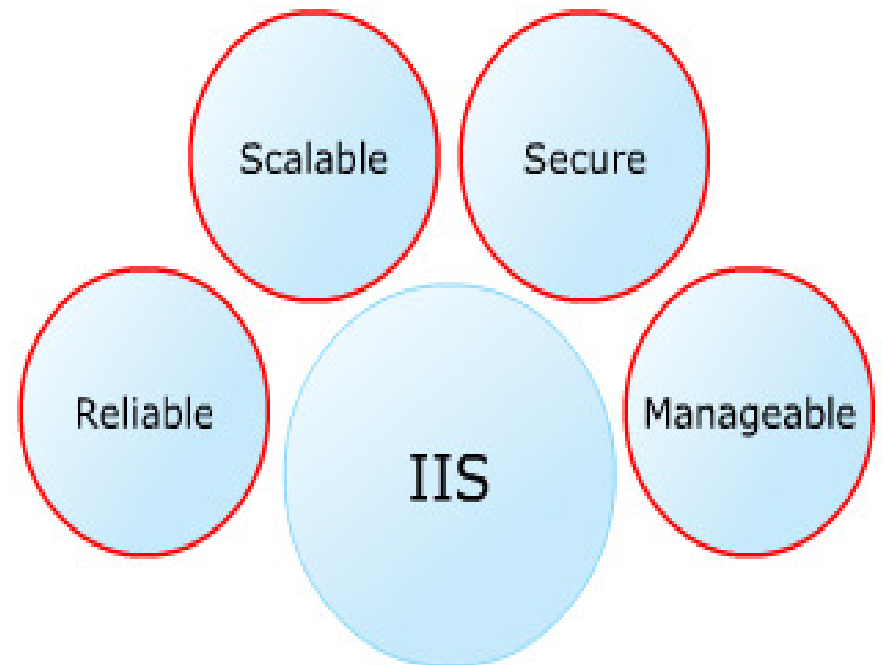
- ❑ A Web Server developed by Microsoft
- ❑ Latest version: 6.0?
- ❑ Supports ASP, ASP.NET, XML, SOAP
- ❑ Allows sending mail using SMTP
- ❑ IIS can be administered using IIS snap-in (console)



# Features of IIS

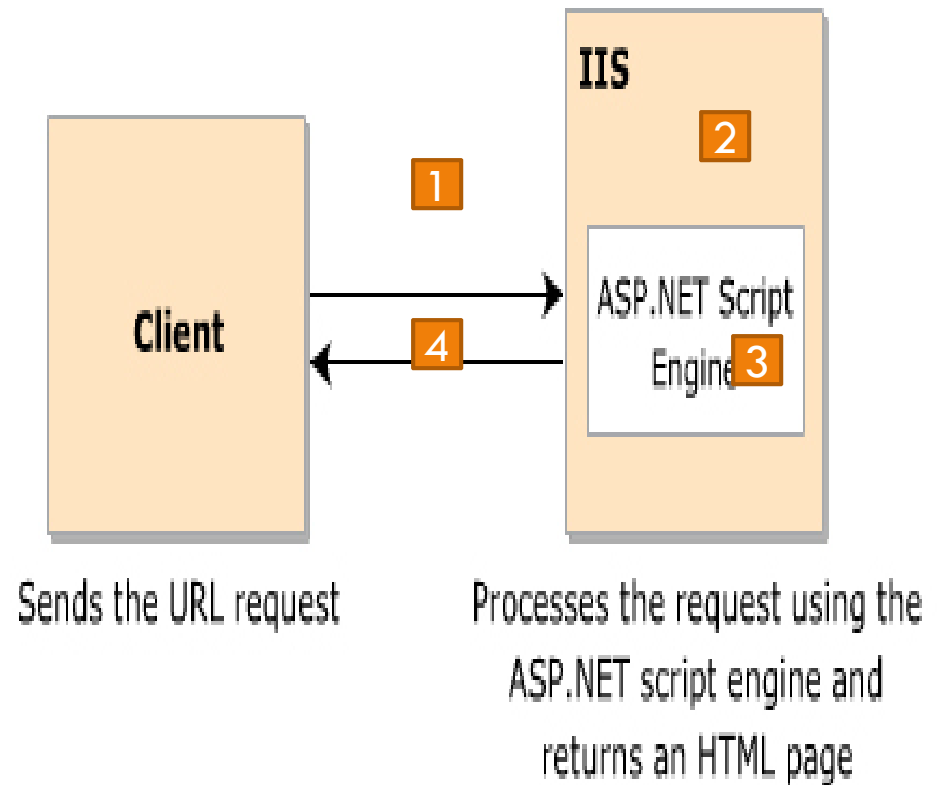
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- ❑ IIS runs on port **80** by default
- ❑ It provides a flexible and strong communication platform for applications



# Working of IIS with ASP.NET Applications

- ASP.NET application are stored on virtual directory
- The ASP.NET script engine executes the server scripts within the application

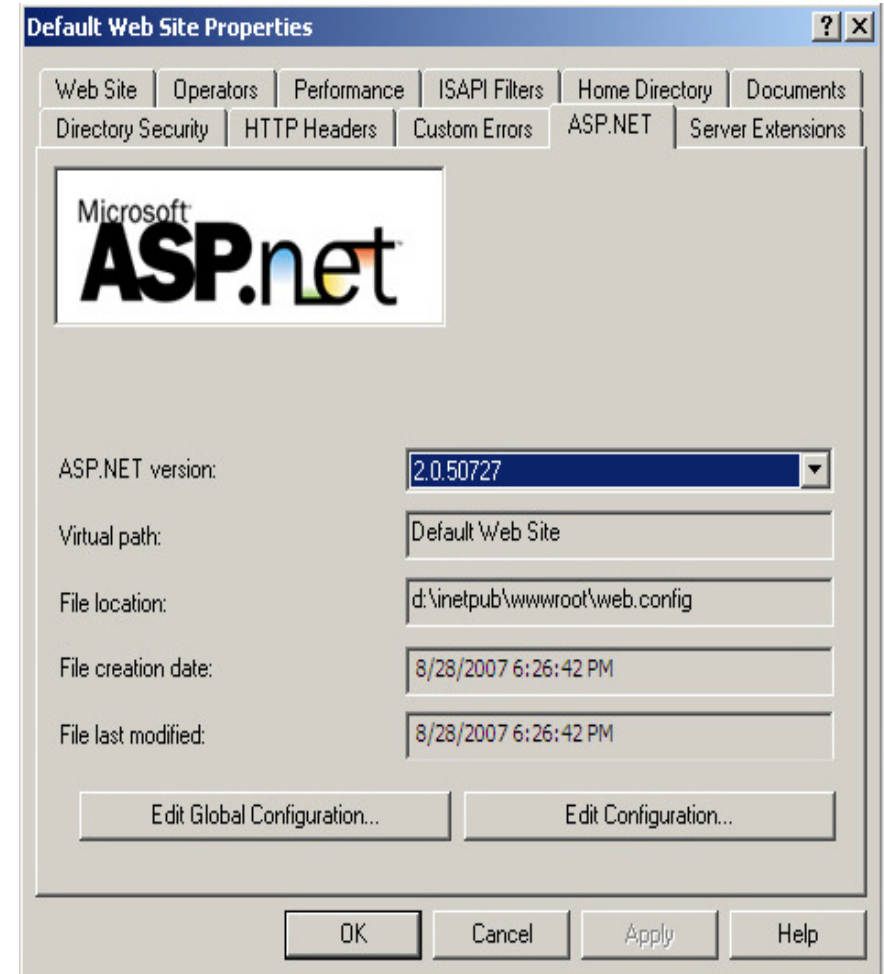




# Configuring IIS

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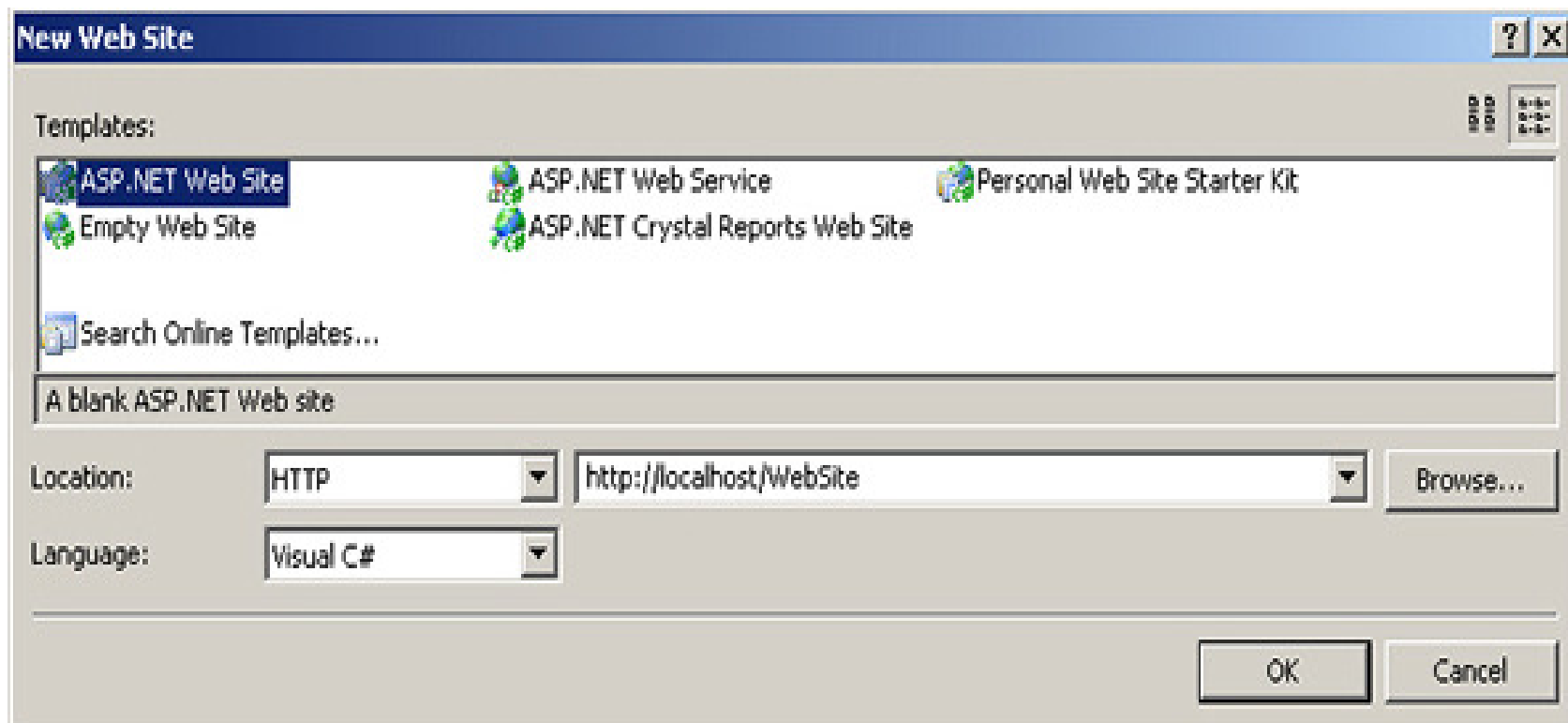
- ❑ IIS Administrative Snap-in is used to manage all ASP.NET applications
- ❑ You can also configure IIS with ASP.NET 2.0 applications by running the **aspnet\_regiis** tool. Since the
- ❑ **aspnet\_regiis** tool is different for different versions of ASP.NET.
- ❑ It is available on  
**%win\_dir%\Microsoft.NET\Framework\%version\_of\_.NET%**
- ❑ **aspnet\_regiis** can be directly from the VS Command Prompt



# Specifying an IIS Web Project

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The IIS Web project needs to be specified for creating IIS based Web applications. To do this, you use the **File** menu, **New** option in Visual Studio 2005, and choose the **New Web Site** option and then select the location as HTTP (<http://localhost/Website>)



# Project Files



## Default files

- ☐ AssemblyInfo.cs
- ☐ Projectname.vsdisco
- ☐ Default.aspx
- ☐ Default.aspx.cs

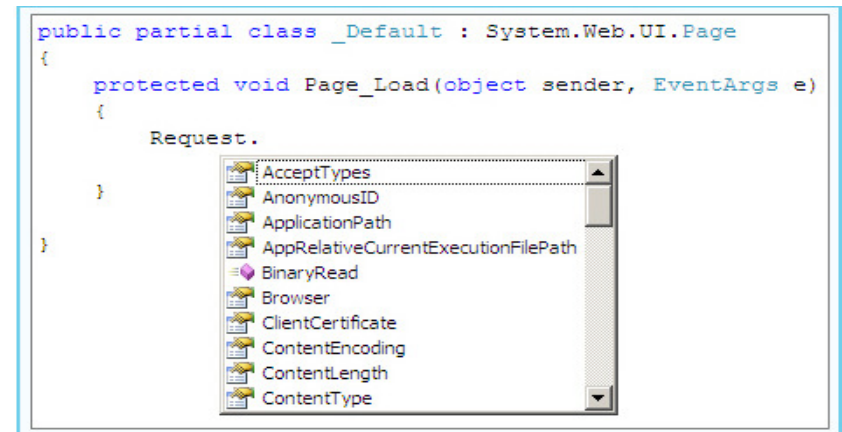
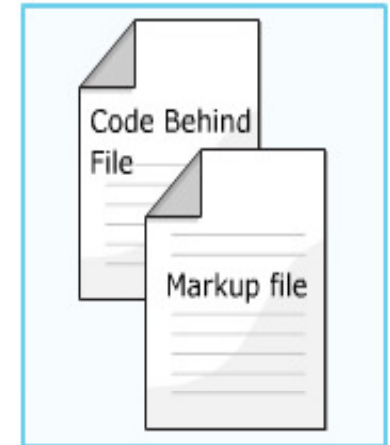
## Optional files

- ☐ Global.asax
- ☐ Web.Config
- ☐ StyleSheet.css

# Features of the new Web Development Environment

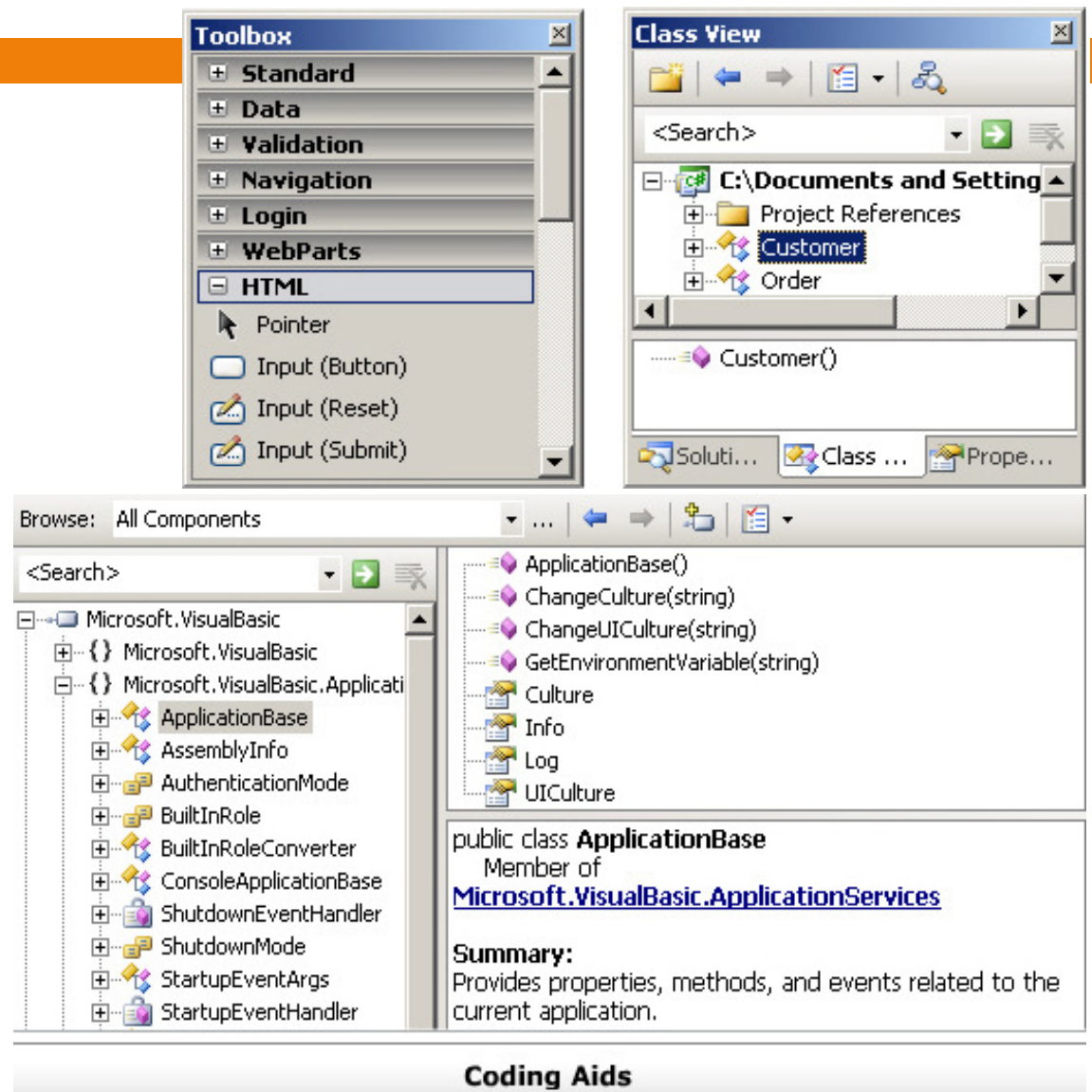
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- ❑ Dynamic Application Compilation
- ❑ Secure Web Site Publishing
- ❑ Easy Programming and Debugging
- ❑ Improved Code Behind Model



# Coding Aids for ASP.NET development

- Code Editor
- ToolBox
- Class View
- Object Browser
- CSS Styles
- Framesets



# Summary – Workshop Activities

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- ❑ Distinguishing ASP and ASP.NET
- ❑ Configuring ASP.NET Application with IIS
- ❑ Creating Web Application using Visual Studio 2005 IDE