ASP.NET is a development framework for building web pages and web sites with HTML, CSS, JavaScript and server scripting.

ASP.NET supports three different development methods:  
Web Pages, MVC (Model View Controller), and Web Forms.

ASP.NET Web Pages - Adding Razor Code

## What is Razor?

* Razor is a markup syntax for adding server-based code to web pages
* Razor has the power of traditional ASP.NET markup, but is easier to learn, and easier to use
* Razor is a server side markup syntax much like ASP and PHP
* Razor supports C# and Visual Basic programming languages

## Main Razor Syntax Rules for C#

* Razor code blocks are enclosed in @{ ... }
* Inline expressions (variables and functions) start with @
* Code statements end with semicolon
* Variables are declared with the var keyword
* Strings are enclosed with quotation marks
* C# code is case sensitive
* C# files have the extension .cshtml

# ASP.NET Web Pages - Page Layout

## Content Blocks

Many websites have content that is displayed on every page (like headers and footers).

With Web Pages you can use the **@RenderPage()** method to import content from separate files.

Content block (from another file) can be imported anywhere in a web page, and can contain text, markup, and code, just like any regular web page.

## Using a Layout Page

Another approach to creating a consistent look is to use a layout page. A layout page contains the structure, but not the content, of a web page. When a web page (content page) is linked to a layout page, it will be displayed according to the layout page (template).

The layout page is just like a normal web page, except from a call to the **@RenderBody()** method where the content page will be included.

Each content page must start with a **Layout directive (**@{Layout="Layout.cshtml";}**)**.

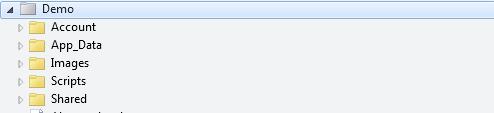
## Hiding Sensitive Information

With ASP.NET, the common way to hide sensitive information (database passwords, email passwords, etc.) is to keep the information in a separate file named "\_AppStart".

# ASP.NET Web Pages - Folders

## Logical Folder Structure

Below is a typical folder structure for an ASP.NET web pages web:



* The "Account" folder contains logon and security files
* The "App\_Data" folder contains databases and data files
* The "Images" folder contains images
* The "Scripts" folder contains browser scripts
* The "Shared" folder contains common files (like layout and style files)

## URLs and Paths

A virtual path is shorthand to represent physical paths. If you use virtual paths, you can move your pages to a different domain (or server) without having to update the paths.

|  |  |
| --- | --- |
| URL | http://www.w3schools.com/html/html5\_intro.asp |
| Server name | w3schools |
| Virtual path | /html/html5\_intro.asp |
| Physical path | C:\MyWebSites\w3schools\html\html5\_intro.asp |

ASP.NET has 3 tools for working with folder paths: the ~ operator, the Server.MapPath method, and the Href method.

## The ~ Operator

To specify the virtual root in programming code, use the ~ operator.

If you use the ~ operator, instead of a path, you can move your website to a different folder or location without changing any code:

var myImagesFolder = "~/images";  
var myStyleSheet = "~/styles/StyleSheet.css";

## The Server.MapPath Method

The Server.MapPath method converts a virtual path (/default.cshtml) to a physical path that the server can understand (C:\Johnny\MyWebSited\Demo\default.cshtml).

You will use this method when you need to open data files located on the server (data files can only be accessed with a full physical path):

var pathName = "~/dataFile.txt";  
var fileName = Server.MapPath(pathName);

## The Href Method

The Href method converts a path used in the code to a path that the browser can understand (the browser cannot understand the ~ operator).

You use the Href method to create paths to resources like image files, and CSS files.

You will often use this method in HTML <a>, <img>, and <link> elements:

@{var myStyleSheet = "~/Shared/Site.css";}  
  
<!-- This creates a link to the CSS file. -->  
<link rel="stylesheet" type="text/css" href="@Href(myStyleSheet)" />  
  
<!-- Same as : -->  
<link rel="stylesheet" type="text/css" href="/Shared/Site.css" />

The Href method is a method of the WebPage Object.

# ASP.NET Web Pages - Global Pages

## Before Web Startup: \_AppStart

Most server side code are written inside individual web pages. For example, if a web page contains an input form, the web page typically contains server code for reading the data.

However, by creating a page named \_AppStart in the root of your site, you can have startup code executed before the site starts. If this page exists, ASP.NET runs it the first time any page in the site is requested.

## Before Every Page: \_PageStart

Just like \_AppStart runs before your site starts, you can write code that runs before any page in each folder.

For each folder in your web, you can add a file named \_PageStart.

Typical use for \_PageStart is setting the layout page for all pages in a folder, or checking that a user is logged in before running a page.

# ASP.NET Web Pages - HTML Forms

A form is a section of an HTML document where you put input controls (text boxes, check boxes, radio buttons, and pull-down lists)