

# ASP.NET programming

## ASP.NET AJAX

# ASP.NET AJAX Overview

- Free Microsoft AJAX framework for building highly interactive and responsive web applications that work across all popular browsers
- Enables the creation of Web pages that include a rich user experience with responsive and familiar UI elements
- Gives improved efficiency, because significant parts of a Web page's processing are performed in the browser
- Lets the server controls to be customized to include client capabilities

# ASP.NET AJAX server-side controls

## • ScriptManager

- Central to AJAX functionality, obligatory on every AJAX page
- Downloads AJAX Library scripts to the browser and coordinates partial-page updates
- Enables managing browser history in an AJAX application by updating the browser back button after an AJAX request.

## • ScriptManagerProxy

- Enables nested components to add script and service references to pages when a ScriptManager control is already defined in a parent element

## • UpdatePanel

- Enables updating a portion of a page without requiring reload of the entire page.

## • UpdateProgress

- Can be used to improve the user experience by keeping user informed about the status of partial-page updates

## • Timer

- Performs postbacks at defined intervals
- If used with UpdatePanel control, enables partial-page updates at defined intervals

# ASP.NET AJAX AsyncPostBackTrigger

- Used to enable controls to be triggers for an UpdatePanel control
  - Controls that are triggers for an update panel cause a refresh of the panel's content when they post back
- Is useful
  - For controls that are outside a panel to cause a panel refresh
  - For controls that are inside a panel when the ChildrenAsTriggers property is false to cause a panel refresh
  - For controls that are inside nested panels to cause a refresh of parent panels
- Two ways to add
  - By using the UpdatePanelTrigger Collection Editor dialog box in the designer
  - By creating a <Triggers> element declaratively in the UpdatePanel control

# DEMO

## AJAX

# ASP.NET AJAX Control Toolkit

- Community supported project
- Freely downloadable
- Contains 40 additional AJAX controls

## Downloading and installing

- Download AJAX Control Toolkit from [www.codeplex.com/AjaxControlToolkit](http://www.codeplex.com/AjaxControlToolkit).
- To install AJAX Control Toolkit see instructions at <http://www.aspnetutorials.com/tutorials/ajax/>

# AJAX Summary

With ASP.NET AJAX the developer can

- Create next-generation interfaces with reusable AJAX components
- Enhance existing pages using powerful AJAX controls with support for all modern browsers
- Access remote services and data from the browser without tons of complicated script
- Take advantage of the improved efficiency and ease of use in Visual Studio 2008, with its built-in support for ASP.NET AJAX, improved JavaScript support, and a new Web page designer interface
- Exploit community supported AJAX Control Toolkit

# Links

Microsoft official AJAX web site

<http://ajax.asp.net>

Microsoft AJAX learning videos

<http://www.asp.net/learn/ajax-videos/>

Microsoft AJAX Control Toolkit Samples

<http://www.asp.net/ajax/ajaxcontroltoolkit/samples/>

Microsoft AJAX Control Toolkit download

<http://www.codeplex.com/AjaxControlToolkit>

Microsoft AJAX tutorials (including AJAX Control Toolkit installation)

<http://www.aspnetutorials.com/tutorials/ajax/>