

# ASP.NET MVC Extensibility

Customizing ASP.NET MVC Applications  
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# Agenda

- ASP.NET Default Architecture
- ASP.NET Extension Points
  - HtmlHelper Extensions
  - Controller Factories
  - View Engines
  - Filters
- ASP.NET MVCCContrib
- Questions

# ASP.NET MVC Defaults

## View Engine

WebForms View Engine

HtmlHelper

ViewData and TempData

## Controllers

Invoked via convention based on route data

ViewData and TempData

# HtmlHelper Extension Methods

- Html property of MvcViewPage is an instance of HtmlHelper class
- Allows for encapsulation of markup and scripts
- HtmlHelper instance has access to ViewData and TempData via ViewContext
- Methods may return strings or emit markup
  - `<%=Html.Method() %>` vs. `<% Html.Method(); %>`
- Demo: Simple JavaScript Dialog Extensions

# Custom Controller Factories

- Use to create custom *IController* instances
- Often used to work with IoC Containers
- Implement *IControllerFactory* interface
  - *CreateController* returns instance of an *IController*
  - *ReleaseController* for cleaning up
- Set custom factory in application start using *ControllerBuilder.SetControllerFactory*
- Demo: *PigLatinControllerFactory*

# Custom View Engine

- Allows for non-Web forms view engines
- Implement *IViewEngine* interface
  - Abstract methods for finding & releasing views
- Implement *IView* interface
  - Abstract Render method
- Custom *IViewEngine* returns *ViewEngineResult* that uses custom *IView*
- Demo: A Simple ViewEngine

# Action Filters

- Allow code to be wrapped around controller actions and view results
- Similar to HttpModules
- Provide a mechanism for removing cross cutting code (logging, authorization, etc.) from controller classes
- Demo: SitePerformanceFilter

# ASP.NET MVCCContrib

- Open source project hosted at CodePlex
- Enhancements on top of standard MVC
  - HtmlHelper extensions
  - IoC controller factories
  - Alternative ViewEngines
  - VS.NET Code snippets and more
- Integration points with several other open source projects (NVelocity, Spring.NET, etc.)

# MVCContrib UI Helpers

- FluentHtml Helpers
  - Fluent API for generating markup
  - Helper methods of the View, not HtmlHelper
  - Type safety with strongly typed view
- Grid Helper
  - HtmlHelper for generating grids of model data
  - Fluent API
- Demo: UI Helpers

# MVCContrib Controller Factories

- Allows controllers and controller dependencies to be managed by IoC container
- Support for several popular containers
  - Spring.NET
  - Castle Windsor
  - Structure Map
  - Unity
- Demo: Spring.NET Controller Factory

# MVCContrib View Engines

- Provides support for several alternative view engines (using popular templating engines)
  - Brail
  - NHaml
  - NVelocity
  - Spark
- Demo: Brail View Engine

# MVContrib Filters

- PreCondition Filter
- Rescue Filter
- Layout Filter
- Demo: PreCondition Filter

# Resources

<http://www.codevoyeur.com> – DLR Samples, other OSS samples, presentations and articles

<http://www.dllhell.net> – My blog

<http://mvcccontrib.codeplex.com/>

<http://www.asp.net/mvc>

# Questions?