

ASP.NET MVC Extensibility

Customizing ASP.NET MVC Applications
Fairfield/Westchester Code Camp
2009-11-07

John C. Zablocki
Development Lead, MagazineRadar
Adjunct, Fairfield University

Agenda

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

- 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?