

ASP.NET MVC FOR WEBFORMS DEVELOPERS

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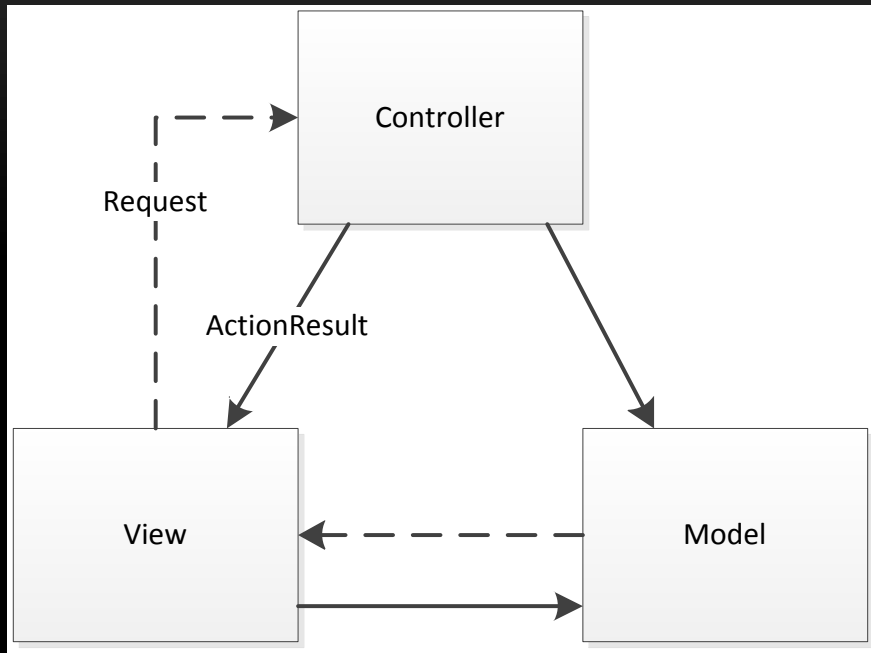
Microsoft MVP, ASPInsider, MCSD, MCDBA, CSM, CSP



Phil.About()

- Independent Consultant
- Web, Client, Database, Training
- Microsoft MVP, ASPInsider, MCSD, MCDBA, CSM, CSP
- Founder, Agile Conferences, Inc.
- President, Cincinnati .NET User's Group
- Co-host, Hallway Conversations
 - www.hallwayconversations.com

WHY ASP.NET MVC?



- Full Control over HTML and URLs
 - Multiple HTML Forms
- Separation of Concerns
- Extensible
- Testable
- Convention over Configuration
- Dependency Injection Support

WHAT'S NOT IN MVC



- Pages/CodeBehind
- Postbacks/Viewstate
- Page/Event Lifecycle
- “Classic” server controls

WHAT'S STILL THERE?

- IIS
- WebFormsViewEngine
 - Master pages
- HTTPHeaders and HTTPModules
- Tracing, Debugging, Health Monitoring
- State Management
 - Caching
 - Session State
 - Cookies
 - Request Storage
- Site Maps
- Personalization and Localization

RUNNING IN VISUAL STUDIO

The image shows two overlapping dialog boxes from Visual Studio. The top dialog, titled 'Start Action', has a tabbed interface. The 'Start Action' tab is active, showing radio buttons for 'Current Page', 'Specific Page', 'Start external program', 'Start URL', and 'Don't open a page. Wait for a request from an external application.' The 'Specific Page' option is selected, and a red arrow points to it. Below these are text boxes for 'Command line arguments', 'Working directory', and 'Start URL'. The bottom dialog, titled 'Servers', has a tabbed interface. The 'Servers' tab is active, showing a checked checkbox for 'Apply server settings to all users (store in project file)'. Below this are radio buttons for 'Use Visual Studio Development Server' and 'Use Local IIS Web server'. The 'Use Local IIS Web server' option is selected, and a red arrow points to it. Other options include 'Auto-assign Port', 'Specific port' (with a text box containing '1135'), 'Virtual path:' (with a text box containing '/'), 'NTLM Authentication' (unchecked), 'Use IIS Express' (checked), and 'Project Url:' (with a text box containing 'http://localhost:1135/'). A 'Create Virtual Directory' button is at the bottom right.

- Set to Specific Page
- Leave it blank
- Use IIS Express
- More inline with IIS
- Change Default Browser

CONVENTION OVER CONFIGURATION

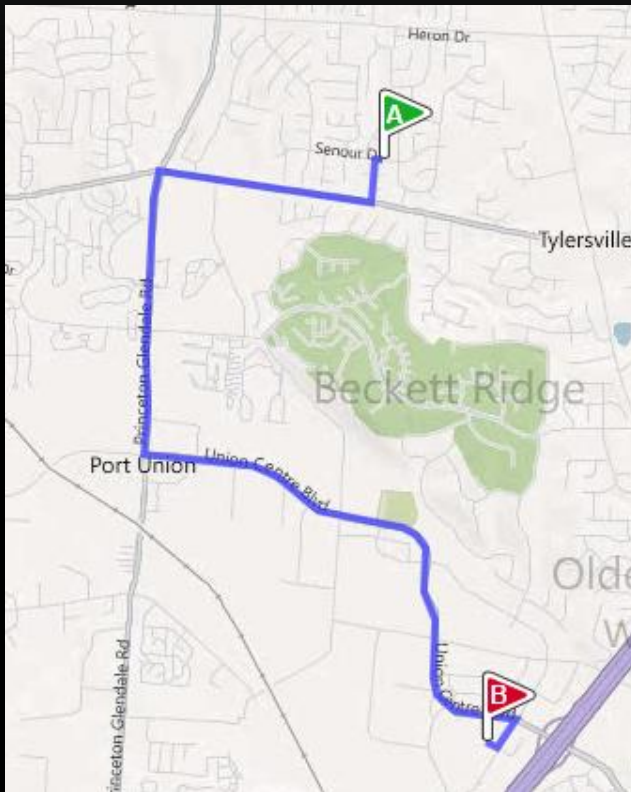


```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<!-- This XML document was generated by RCCOB2XML -->
<SOAP-ENV:Envelope
  xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:tns="http://www.easternstandardtime.com">
  <SOAP-ENV:Body>
    <TRAIN xmlns="http://www.easternstandardtime.com" Time="13:00">
      <LOCOMOTIVE>
        <Name>Thomas</Name>
        <Length>12,000.00</Length>
        <Weight>3,400</Weight>
      </LOCOMOTIVE>
      <CARRIAGE>
        <Name>Annie</Name>
        <Length>10,000.00</Length>
        <Weight>2,000</Weight>
        <Other_Information>
          Room for
          <count>100</count>
          standing & seated
        </Other_Information>
      </CARRIAGE>
      <CARRIAGE>
        <Name>Clarabel</Name>
        <Length>12,500.00</Length>
        <Weight />
      </CARRIAGE>
    </TRAIN>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
</TRAINDOC>
```

Config.xml

- Controllers
 - `<name>Controller`
- Views
 - Named for Action
 - Placed in `/Views/<ControllerName>`
- Layouts
 - Start with “_”
- Project Structure

ROUTING



- Added to Web Forms in ASP.NET 4
- Directs Incoming URLs to correct Controller/Actions
- Creates Outgoing URLs
- SEO Optimized

MODELS

- The data of the application
- Supports
 - Data Annotations
 - Additional Metadata



VIEW MODEL

- Façade for individual models
- Transport mechanism for models



CONTROLLERS



- Process Incoming requests
- Perform changes to the model
- Select views to render to the user

ACTIONS



- Methods of a controller
 - Each Exposed by unique URLS
- Return an ActionResult
 - View, Redirect, Json, etc.

ACTION FILTERS



- Authorization
- Action
- Result
- Exception

CHILD ACTIONS



- Invoked from a View
- Similar to Partial Views
- Encapsulates controller logic

MODEL BINDING



- Reconstitutes form values into target object
- Runs validations

VALIDATION



- Server side with Data Annotations
 - Can create custom annotations
- Client side with JQuery Validate
 - Must enable in web config
 - Enabled by default in MVC5
 - Must enable on page
 - Enabled by default in MVC5

VIEWS



- Strongly Typed
- Accepts Interactions from User
- Returns results of interactions back to user

VIEW LAYOUTS



- Similar to Master Pages
- `@RenderBody()`
- Renders view
- Supports Sections

PARTIAL VIEWS



- Strongly typed
- Building blocks for complex views
- Increase code re-use
- DRY

PASSING DATA TO THE VIEW



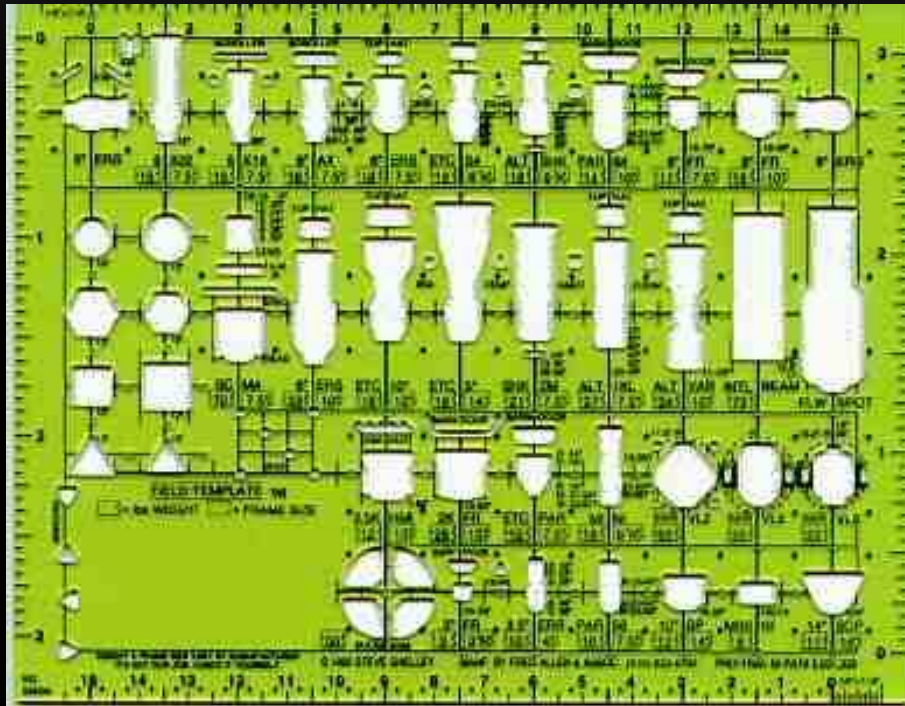
- ViewData
- ViewBag
 - New in MVC3
- TempData

AJAX AND JSON



- AJAX:
 - One line of code
 - Beware IE caching
- Json
 - Return JsonResult
 - Must Explicitly Allow Get

HTML HELPERS AND TEMPLATES



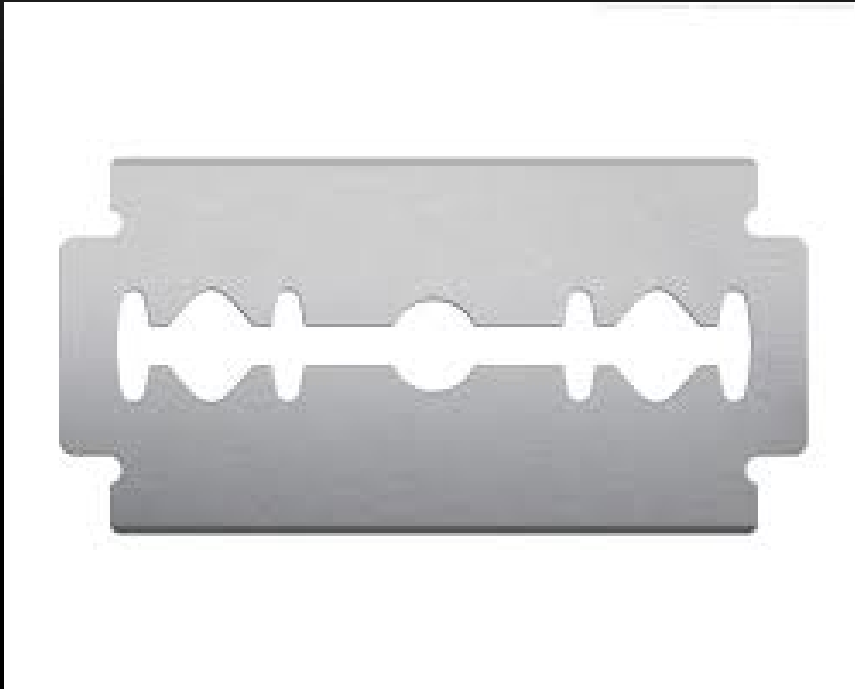
- Helpers
 - Extensions to Html
- Templates
 - DisplayForModel || EditorForModel
 - DisplayFor || EditorFor

SECURITY



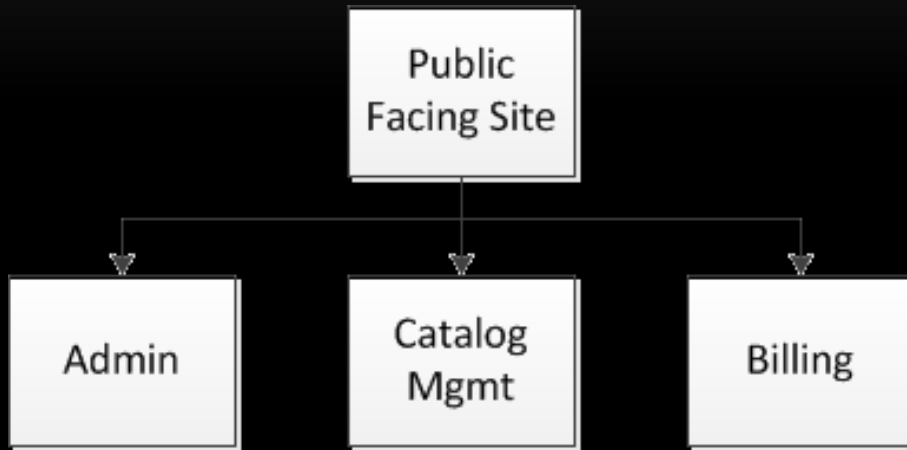
- Cross Site Request Forgery
 - Controller
 - `ValidateAntiForgeryToken`
 - View
 - `@Html.AntiForgeryToken`
- OverPosting
 - Controller
 - Bind
 - Include (whitelist)
 - Exclude (blacklist)

RAZOR VIEW ENGINE



- Greatly reduces typing
- Mixes HTML and Code cleanly
 - Increases readability
- Compiled at runtime
- WebForms and Razor both enabled by default

AREAS



- Functional Segments of application
- Enhance Separation of Controls
- Fully supported by routing system
- Add namespace to routing

DEMO
DEWNO

ASP.NET MVC

Questions?



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Thank
You!