Routing, Controllers and Actions

Routing

- Patterns
    - What are they?
    - Why should I care?
- Order, Order, Order
- Routing Module
    - Why does it matter?
- Constraints on pieces

Controllers

- MVC Handler
    - What does it do?
- ControllerBuilder & ControllerFactory
- Difference between IController and Controller
- Base Controller Classes
- ActionInvoker and Interaction

Actions

- How are they found?
- Filters; how do they alter action state?
- Controllers are filters – is this OK?
- ActionResults – tailoring content to the "view"
    - **Sample: POCO Actions**

Quick Lab

Controllers and Action

- If odd, redirect to http://www.google.com
- If even, give the value of JSON
- If divisible by 3, show the value in HTML

Views, ViewModels and Clients

Views

- How are they found?
- How are ViewEngines work?
  - Why do they need to play nice?
- What should you look for in a View Engine?
  - Simplicity
  - Transparency
- HTML Helpers
  - Why use them?
  - *Sample: Base HTML sample*
- Encoding
  - Explicitly <%= %>
  - Implicitly <%: %>
- MasterPages & Lack of Control
- Partial Views for snippets
- Display Templates
  - Where you place them?
  - MVC Futures (samples)
  - Out of box are code
- Editor Templates
  - Metadata for validation/UI generation
  - *Sample: Model Templates*

ViewModels

- Specifying contract for data
- Strongly-typed views
- Helpers for strongly-typed views

Clients

- jQuery for posting of data (JSON)
  - ***Sample: JSON "POST"***

QuickLab

Person Manager

- Person data
  - First Name
  - Last Name
  - Age
- Stores data in static list and displays content in list view

Models, Binders and More

Model Binder
- Input models
    - Pulling data from route, query string, etc.
- Custom Binders
    - ***Sample: JSON Model Binder***

Models
- Model to View
    - Downsides of such approach
- Mapping the Model to the ViewModel
    - Manual mapping
    - AutoMapper
- Options for "M"
    - LINQ to SQL
    - Caslte ActiveRecord
    - NHibernate

QuickLab

Simple To-do Tracker
- Support entry per day
    - Name
    - Description
- Displays list of tasks for a specific day
    - Date can change via URL
- Displays list of all tasks

AppLab

miniURL

- Takes a URL and assigns it a "short name" to it
- When "short name" is typed into the application URL, redirection happens to original URL

Extra features

- Keep track of how many times URL is viewed
- Display URL info (views) with original URL when short name is "queried" in an specific way