

Creating and Configuring Models

Module Overview

- What is a Model?
- Creating Models
- Advanced Model Concepts

What is a Model?

What is a Model?

- A class
- No really, that's it. It's just a class.
- I promise – it's just a class.

Creating Models

Who Uses the Model?

- User
 - What data will they be interacting with?
- MVC
 - Input controls
 - Display formatting
 - Validation

Preparing Models

- Attributes
 - “Decorate” properties
- Available Attributes
 - DataTypeAttribute
 - DisplayAttribute
 - Validation
 - RequiredAttribute
 - StringLengthAttribute
 - RegularExpressionAttribute
 - CompareAttribute

Data Types

- Validation
- Input controls
 - HTML5
- Available Data Types
 - CreditCard
 - Currency
 - EmailAddress
 - Password
 - Url

Prompts

- Display Attribute
 - Name
 - Display prompt and header

DisplayFormat

- Uses a .NET format string
 - {0:C}
 - Currency
 - {0:0.00}
 - Always use two decimal places
 - .42 displays as 0.42
 - 42 displays as 42.00
 - {0:d-m-yy}
 - Single digit day & month, two digit year
 - June 10th, 2014 displays as 10-6-14
 - [http://msdn.microsoft.com/en-us/library/system.string.format\(v=vs.110\).aspx](http://msdn.microsoft.com/en-us/library/system.string.format(v=vs.110).aspx)
 - See the Q&A

Adding Validation

- Attributes
 - Required
 - StringLength
 - MinLength
 - MaxLength
 - RegularExpression
 - Range
- Error Message
 - {0} will use the display name
 - "{0} must be provided"

Where Does Validation Occur?

- On the server
 - ModelState.IsValid property
- On the client
 - Requires jQuery unobtrusive validation

Advanced Model Concepts

How Models Make Life Easier

- Automatic UI creation
- Model Binding
 - Controllers are classes
 - Actions are methods
 - Methods take parameters
 - MVC will convert forms to parameters

Advanced Model Concepts

- Custom Validation Attributes
 - When the built-in attributes aren't good enough
 - Integrates with MVC
- View Model
 - Differences between domain and user interface
 - Complex data
 - Dropdown lists
 - Unrelated objects