

Invoking the Right Logic and Loading the Correct Page



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Overview



ASP.NET MVC Routing

Default routes

Custom routes

Route attributes

Why would you want to customize this?

Integration Testing



First up: Routing Overview



How does ASP.NET MVC
turn URLs into method calls?



ASP.NET MVC Routing



ASP.NET MVC Controllers

Perform actions in the application

Made up of action methods

Responsible for...

- ...creating the Model
- ...passing the Model to the View



ASP.NET MVC Routing

Set of rules

Take a URL string

Determine if the URL matches a 'template'

Templates are mapped to Controllers

Call the appropriate Controller action

Pass any relevant parameters



The Default Route in Startup.cs

```
app.UseMvc(routes =>
{
    routes.MapRoute(
        name: "default",
        template: "{controller=Home}/{action=Index}/{id?}");
});
```



Custom Routes

Add to Startup.cs

- MapRoute()

Attribute-based

- [Route()]
- [HttpGet()]
- [HttpPost()]



Why would you want to
customize your routes?



Why Custom Routes?

You need a map a URL pattern to a Controller action

The URL pattern goes beyond the default route

The URL pattern conflicts with the default route

You need to support legacy URLs in your application

- Make old URLs still work



Next up:
Create a Custom Route
Using Attributes



Demo



Define a Custom Route using attributes

President database

New Controller action

New URL format

`http://{hostname}/president/{lastname}/{firstname}`

`http://myhostname/president/cleveland/grover`



Next up:
Create Custom Route to Support
a Legacy URL Format



Demo



Define a Custom Route using attributes

President database

Existing Controller action

Support an old URL format from the ASP.NET WebForms version of the app

`http://{hostname}/president/{id}.aspx`

`http://myhostname/president/1.aspx`



Next up:
Integration Tests for
Custom Routes



Demo



Integration tests for our custom routes

`WebApplicationFactory`

Set up the structure of the test fixture

Write the tests for each of the custom routes



Summary



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Route attributes

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Integration Testing



Next up:
Testing Security Logic and
Middleware

