✓ 100 XP

Understand tag helpers and page handlers

4 minutes

In the previous unit, you created a Razor Page that displays a list of pizzas. You used the `@` symbol to switch contexts between HTML and C#. In this unit, you'll learn about *tag helpers*. Tag helpers are a special kind of HTML element that can contain C# code. You'll also learn about *page handlers*. Page handlers are methods that handle browser requests. You'll use page handlers in the next unit to add and delete pizzas.

Tag helpers

Tag helpers are used to address the inefficiencies of context switching between HTML and C#. Most of ASP.NET Core's built-in Tag helpers extend standard HTML elements. Tag helpers provide extra server-side attributes for HTML elements, making the elements more robust.

There are four tag helpers you should know for this project: **Partial**, **Label**, **Input**, and **Validation Summary Message**.

Partial Tag Helper

```cshtml
<partial name="_ValidationScriptsPartial" />
```

This injects the contents of the `_ValidationScriptsPartial.cshtml` file into a page. The `_ValidationScriptsPartial.cshtml` file contains JavaScript that's used to validate form input, so it needs to be included on every page that contains a form.

Label tag helper

```cshtml
<label asp-for="Foo.Id" class="control-label"></label>
```

This extends the standard HTML `<label>` element. Like many tag helpers, it uses an `asp-for` attribute. The attribute accepts a property from the `PageModel`. In this case, the name of the `PageModel`'s `Foo.Id` property (specifically, the string `"Id"`) will be rendered as the content for an HTML `<label>` element.

Input tag helper

```cshtml
<input asp-for="Foo.Id" class="form-control" />
```

Similar to the previous example, this extends the standard HTML `<input>` element. It also uses an `asp-for` attribute to specify a `PageModel` property. In this case, the value of the `Foo.Id` property will be rendered as the `value` attribute for an HTML `<input>` element.

Validation Summary Tag Helper

```cshtml
<div asp-validation-summary="All"></div>
```

The Validation Summary Tag Helper displays a validation message for a single property on the model.

> ⓘ **Note**
>
> Things like validation rules and property display names are defined in the `PageModel` class. We'll point out where to find them in the code in the next unit.

Page handlers

The `PageModel` class defines page handlers for HTTP requests and data used to render the page. In the previous exercise, the `PizzaListModel` class handled the HTTP GET request by setting the value of the `PizzaList` property to the value of `_service.GetPizzas()`.

Common handlers include `OnGet` for page initialization and `OnPost` for form submissions. To handle an HTTP POST, a page handler might verify the user-submitted data, present the input form page again if invalid, or send the valid data to a service or database for persistence.

In the next unit, you'll add a form to create new pizzas using several tag helpers. You'll also add page handlers to handle the form submission and deletion of pizzas.

Next unit: Exercise - Add new pizza form

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