

Improving the Views in the Application



Gill Cleeren

CTO Xebia Microsoft Services Belgium

@gillcleeren

Overview



Using partial views

Creating the shopping cart

Working with view components

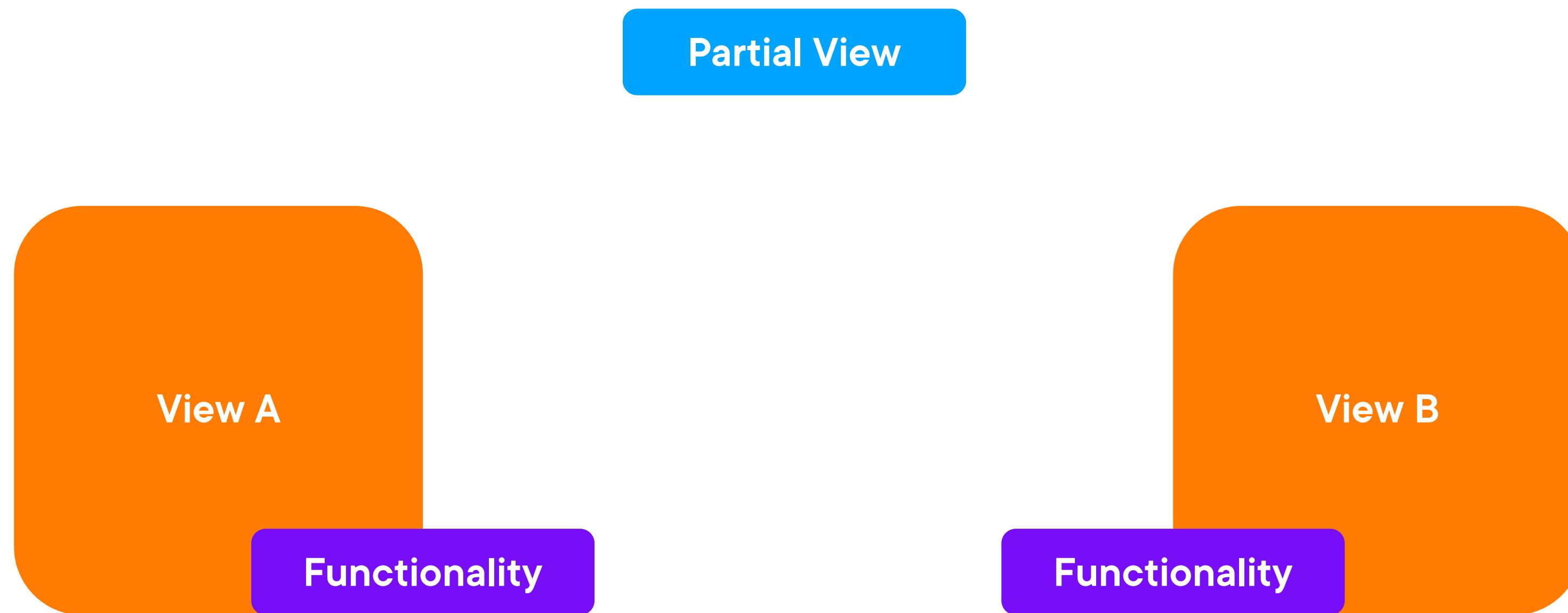
Creating a custom tag helper



Using Partial Views



Partial Views



```
@model Pie
<div>
  <div class="thumbnail">
    
    <h3>@Model.Price.ToString("c")</h3>
  </div>
</div>
```

A Sample Partial View

Name typically start with an underscore



```
@foreach (var pie in Model.Pies)
{
    <partial name="_PieCard" model="pie"/>
}
```

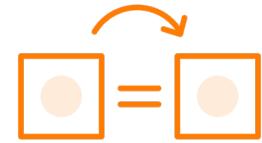
Using the Partial View



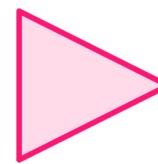
Partial Views



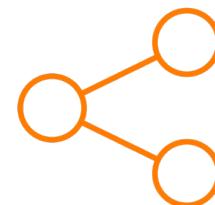
Avoid duplication



Break up large views into multiple smaller views



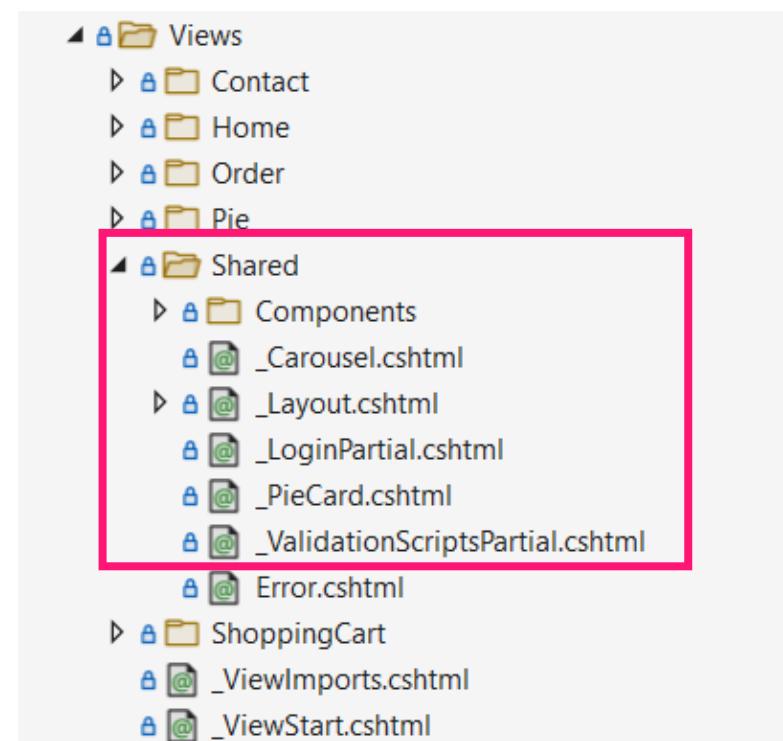
Don't execute `_ViewStart`



Shared or specific folder, convention-based



Partial Views Folder Location



Demo



Creating and using a partial view



Creating the Shopping Cart



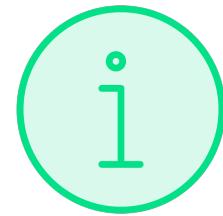


Creating the shopping cart

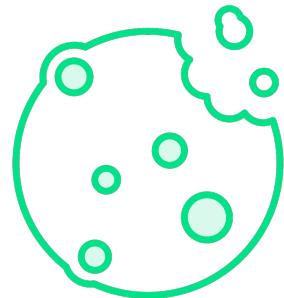
- Cart per user
- GUID created as ID for the cart
- Session ID is stored in cookie



Using Session State



Information stored by app to persist data across requests



Based on cookie



Linked to the browser



```
builder.Services.AddSession();
```

```
...
```

```
app.UseSession();
```

Adding Session Support in the App



Demo



Creating the model

Creating the shopping cart

Enabling session management

Performing a database migration

Adding the shopping cart view

Navigation updates



Working with View Components



```
@model Pie
<div>
  <div>
    
    <h3>@Model.Price.ToString("c")</h3>
    <p>@Model.ShortDescription</p>
```

Partial View Limitations



Introducing View Components

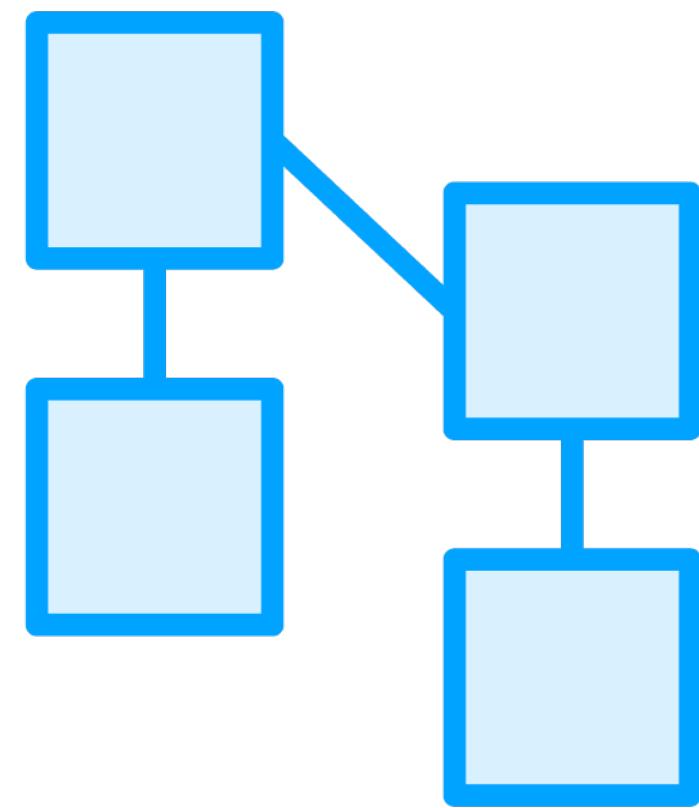
Partial content

Logic and view

**Support for
dependency injection**

Always linked to parent view



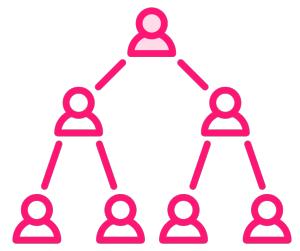


View Component usage

- Login panel
- Dynamic navigation
- Shopping cart
- ...



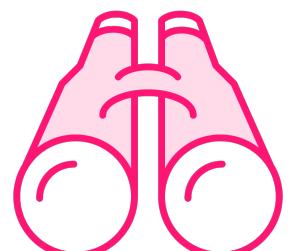
Creating a View Component



Derive from ViewComponent



[ViewComponent]



Suffix with ViewComponent

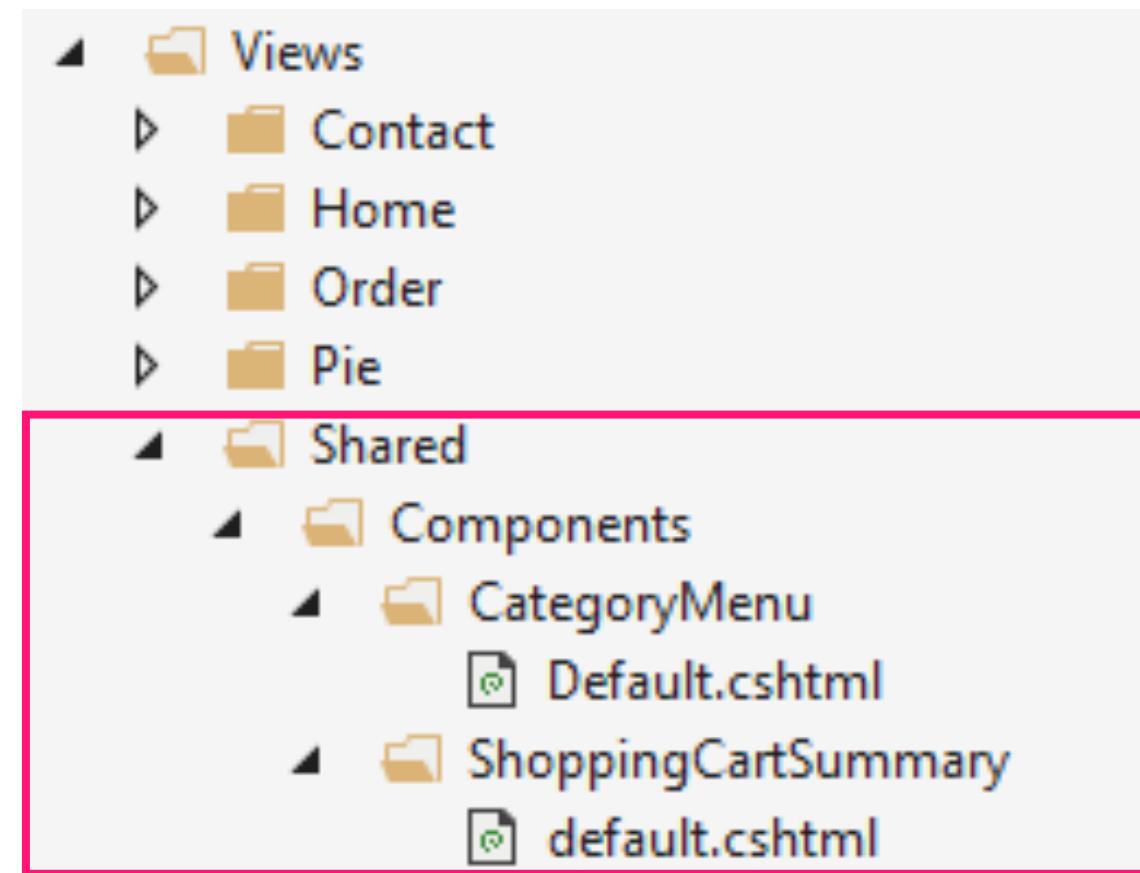


```
public class ShoppingCartSummary : ViewComponent
{
    public IViewComponentResult Invoke()
    {
        return View(model);
    }
}
```

Creating a View Component



View Components Search Path



```
@await Component.InvokeAsync("ShoppingCartSummary")
```

Using the View Component



```
<vc:shopping-cart-summary></vc:shopping-cart-summary>
```

Invoking a View Component with a Tag Helper



Demo



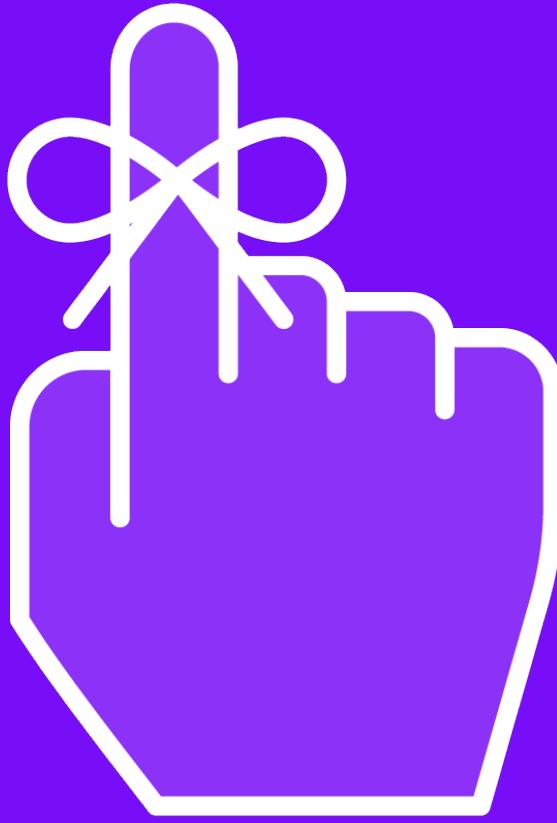
Creating a navigation view component

Creating a shopping cart view component



Creating a Custom Tag Helper

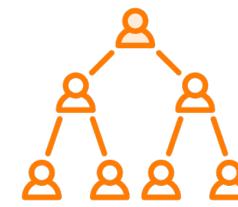




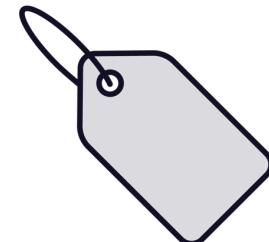
Tag Helpers enable server-side C# code to participate in creating and rendering HTML elements in Razor files.



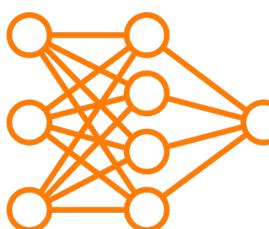
Creating a Custom Tag Helper



Inherit from base `TagHelper` class



`<Name>TagHelper`



Override `Process/ProcessAsync`



Output is HTML



Creating a Custom Tag Helper

```
public class EmailTagHelper : TagHelper
{
    public override void Process(
        TagHelperContext context, TagHelperOutput output)
    {
        ...
    }
}
```



```
<email  
    address="info@@bethanyspieshop.com"  
    content="Contact us">  
</email>
```

Using the Tag Helper



Registering the Custom Tag Helper

```
@using BethanysPieShop.Models  
@using BethanysPieShop.ViewModels  
@addTagHelper BethanysPieShop.TagHelpers.*, BethanysPieShop  
@addTagHelper *, Microsoft.AspNetCore.Mvc.TagHelpers
```



Demo



Creating the contact page

Creating a tag helper

Adding the tag helper to the contact page



Summary



Partial views promote reuse of view code

View Components can be considered an upgrade of partial views

Custom tag helpers wrap common functionality



Up Next:

Creating the order form

