

# Building for Reusability with View Components

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# To-Do List



Understanding Partial Views in Razor

Demo: Working with Partial Views

The Evolution of View Components

Demo: Building a Simple View Component

Demo: Understanding Reusability

Demo: Understanding Isolation

Demo: Adding User Interaction and Ajax



# Working with Partial Views in Razor

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# Managing Markup with Partial Views

Cypher Marketing

✓ Clients

[New Client](#)

[All Clients](#)

✓ Orders

[New Order](#)

[In Progress Orders](#)

[Order History](#)

✓ Inventory

[New Item](#)

[Current Inventory](#)

Welcome to the Ordering Application!

Here you can manage inventory and orders for our customers.

Pending Orders

List group item heading

Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit. Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit...

Last Updated: 9/18/2016 8:12:38 PM

List group item heading

Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit. Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit...

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List group item heading

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See all

Coollest Product

Product	Add Vote
Life Size Cutouts	<a href="#">Vote Up</a>
Glow in the Dark Pens	<a href="#">Vote Up</a>
Flags	<a href="#">Vote Up</a>
Banners	<a href="#">Vote Up</a>

Idea Center

Have an idea for new marketing materials or methods? Don't keep it to yourself!

Subject

Description

Submit

```
<div id="widgets">

  <div class="widget-container">

    @Html.Partial("FeedbackWidget")

  </div>

  <div class="widget-container">

    @Html.Partial("TagCloud", tagModel)

  </div>

</div>
```

◀ Renders a Partial View

◀ Renders a Partial View and passes in a Model instance



# Partial Views and Action Methods

## Index.cshtml

Welcome to the Ordering Application!

Here you can manage inventory and orders for our customers.

### Pending Orders

Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit. Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit.

Last Updated: 10/20/2016 12:38:19 AM

Maecenas sed diam eget risus varius blandit. Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit. Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit.

Last Updated: 10/19/2016 12:38:19 AM

Maecenas sed diam eget risus varius blandit. Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit. Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit.

Last Updated: 10/14/2016 12:38:19 AM

Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit. Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit. Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit.

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Last Updated: 10/17/2016 12:38:19 AM

Coolest Product	
Product	Add Vote
Pens	<a href="#">Vote Up</a>
Flags	<a href="#">Vote Up</a>
Banners	<a href="#">Vote Up</a>

### Idea Center

Have an idea for new marketing materials or methods? Don't keep it to yourself!

Subject

Description

## HomeController.cs

```
public IActionResult Index()
{
    return View();
}
```

// No Action Method



# Demo



Identifying areas of an application that are appropriate for Partial Views

Extracting sections of markup into reusable Partial Views




# The Evolution of View Components

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# The Need for Isolated Components



Clients

New Client

All Clients




Orders

New Order

In Progress Orders

Order History



Inventory

New Item

Current Inventory

## Welcome to the Ordering Application!

Here you can manage inventory and orders for our customers.

### Pending Orders

Donec id elit non

Last Updated: 10/21/2016 1:39:10 PM

Maecenas sed diam eget risus varius blandit. Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit. Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit.

Maecenas sed diam eget risus

Last Updated: 10/20/2016 1:39:10 PM

Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit. Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit.

Maecenas sed diam eget risus

Last Updated: 10/15/2016 1:39:10 PM

Maecenas sed diam eget risus varius blandit. Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit.

Donec id elit non

Last Updated: 10/21/2016 1:39:10 PM

Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit. Donec id elit non mi porta gravida at eget metus. Maecenas sed diam eget risus varius blandit.



### Low Inventory!

Product	Inventory Count
Table Cloths	5
Hoodies	12
Glow in the Dark Pens	11
Balloons	9
Banners	7

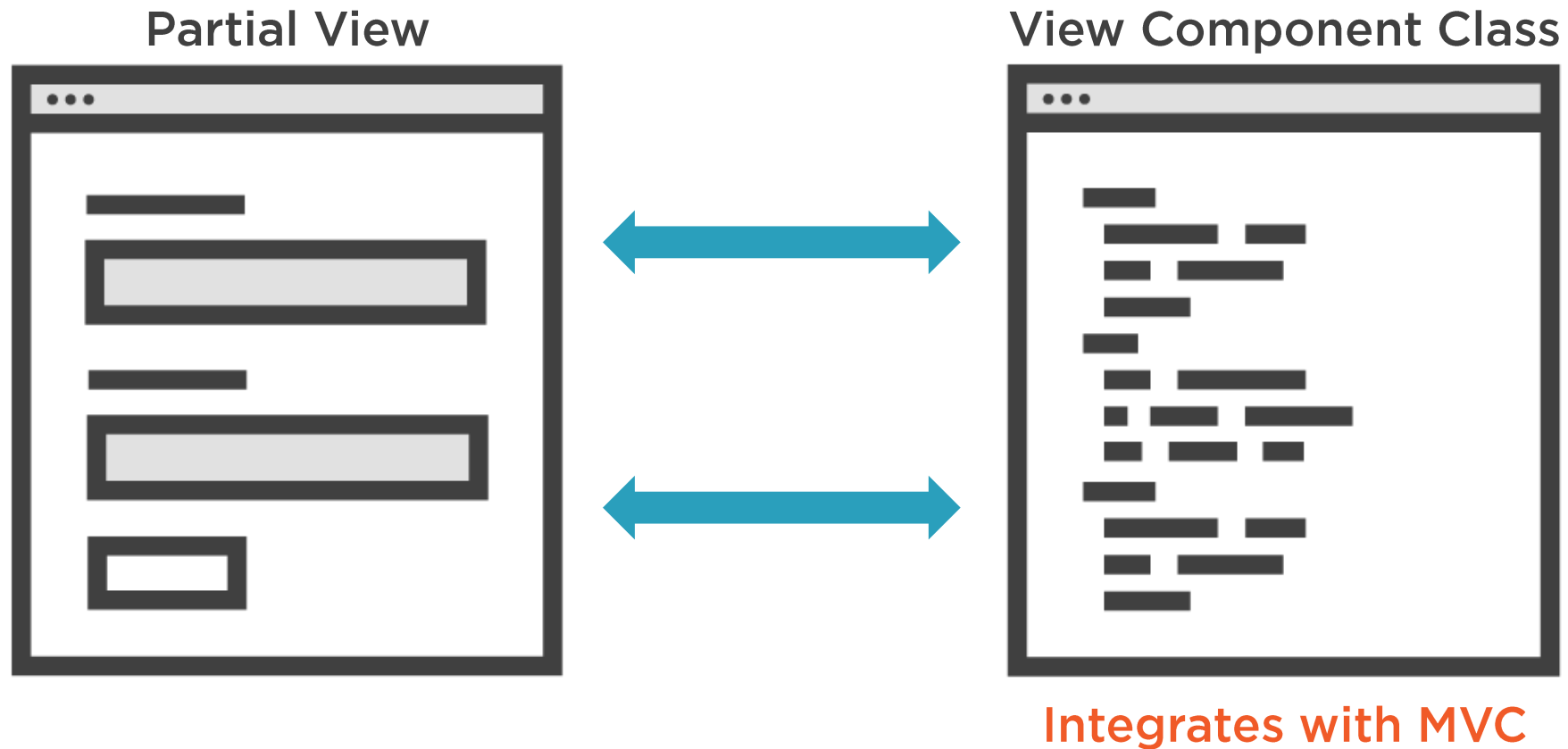


### Cooldest Product

Product	Add Vote
Life Size Cutouts	Vote Up
Glow in the Dark Pens	Vote Up
Flags	Vote Up
Banners	Vote Up



# Empowering Partial Views with Logic



```
public class SurveyViewComponent
{

    public void InvokeAsync()
    {
        // View Component Logic
    }

}
```

- ◀ Create a simple View Component using the ViewComponent suffix
- ◀ InvokeAsync is the main execution method of a View Component



```
public class SurveyWidget : ViewComponent
{
    public void InvokeAsync()
    {
        var headers = Request.Headers;
        ViewBag.Survey = GetSurveyItems();

        return View();
    }
}
```

- ◀ Create a more robust ViewComponent through inheritance
- ◀ Inheritance provides access to MVC Framework data objects
- ◀ Inheritance also offers helper methods, similar to those in a Controller



```
[View Component]
public class SurveyWidget
{

    public void InvokeAsync()
    {
        // View Component Logic
    }

}
```

- ◀ Can also create a simple View Component using the ViewComponent attribute
- ◀ This type of View Component does not have access to MVC helpers and context objects



```
<div id="widgets">
    <div class="widget-wrapper">
        @await Component.InvokeAsync("SurveyWidget")
    </div>
</div>
```

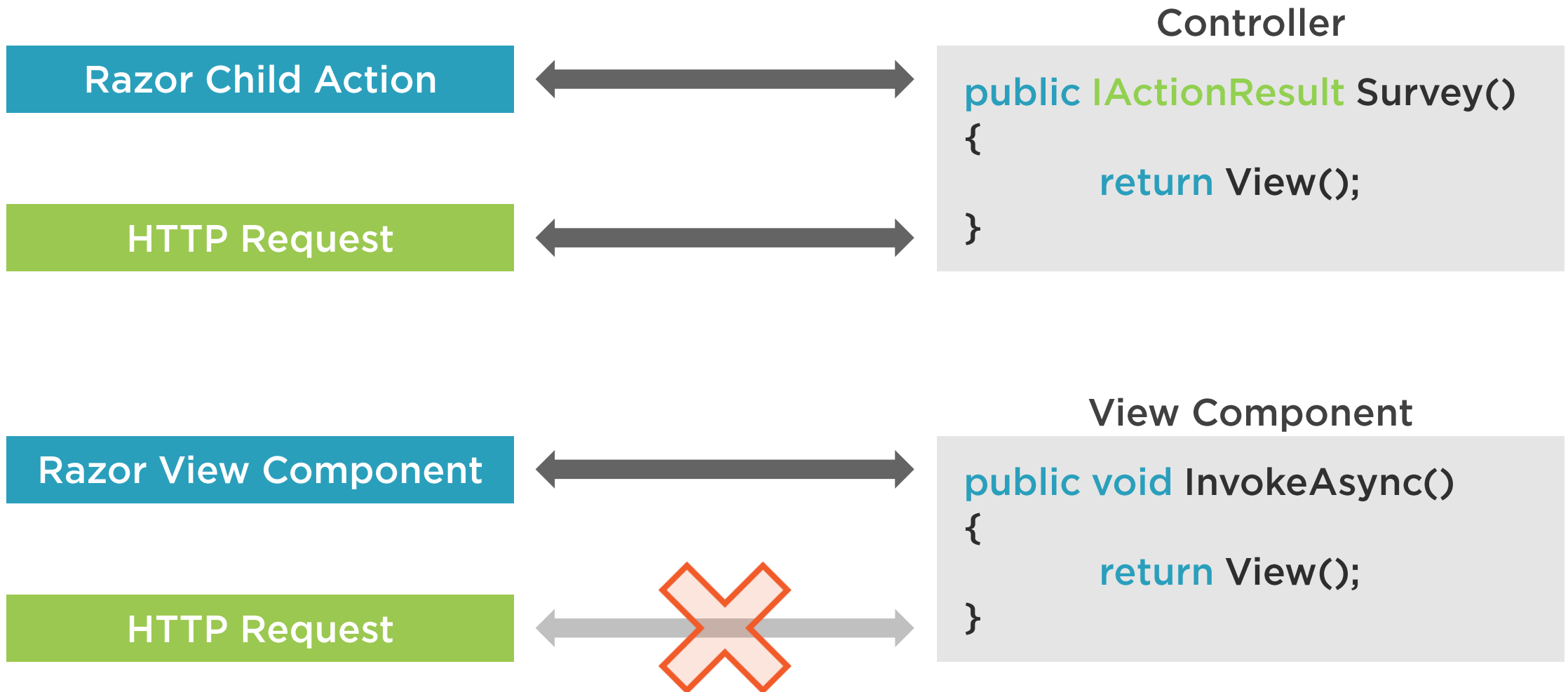
Rendering **View Components** with Razor

**View Components** can be rendered by Razor from inside of Views

Can be invoked with or without Model parameters



# Child Actions and View Components



# Template Search Paths for View Components

	Child Actions	View Components
Razor Search Path	Views/Shared/{ViewName}	Views/Shared/Components/{ComponentName}/{ViewName}





# Demo



Creating a View Component class  
through inheritance

Working with View Components and  
Views

Invoking a View Component



# Demo



Exploring the benefits of reusable code

Using parameters to make View  
Components more flexible



# Demo



Exploring isolation in the context of  
View Components

Understanding how View Components  
can influence forms and Model Binding



# Demo



Adding user interaction and Ajax functionality to a View Component

Invoking a View Component from an Action Method



## Summary



View Components allow for partial views that are supported by complex logic

Inheritance can provide View Components with convenience properties and methods

View Components provide reusability and isolation to protect other parts of MVC

HTTP Requests cannot be directly serviced by View Components

Controllers can also execute and return View Components to enable request management

