

Adding Routes and Navigation



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Overview



Routing in ASP.NET Core and ASP.NET Core MVC

Configuring routes

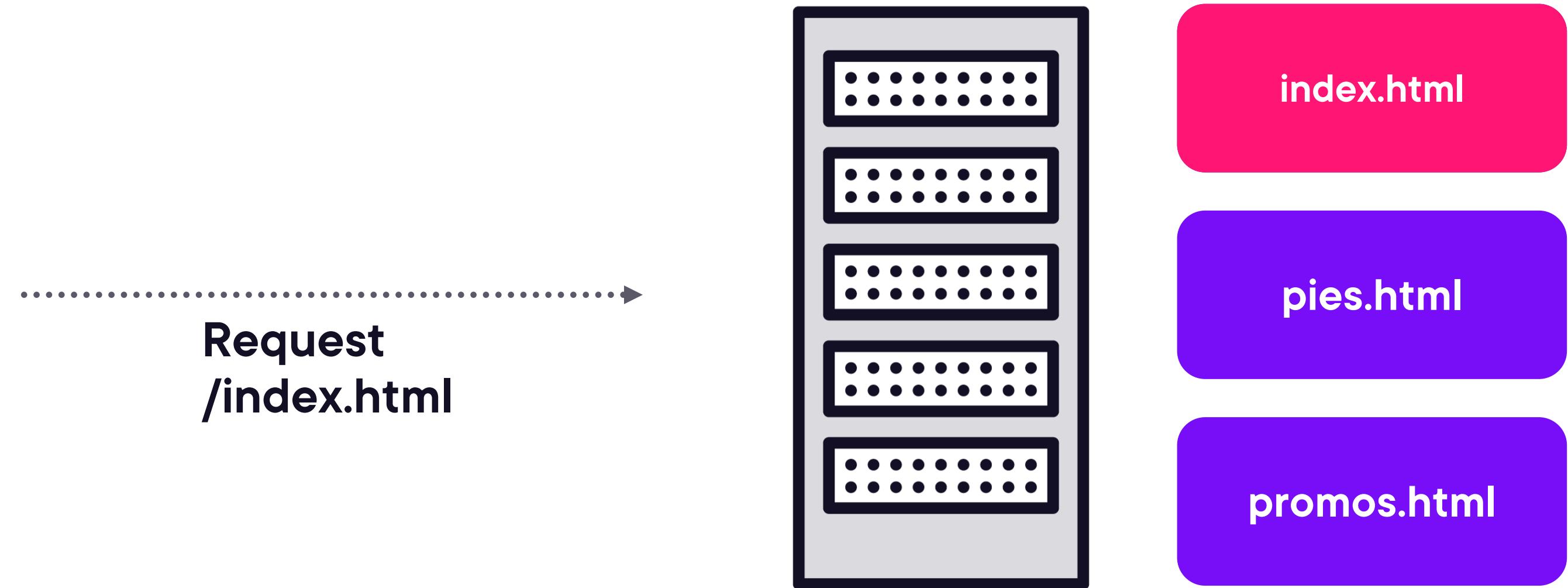
Navigating with tag helpers



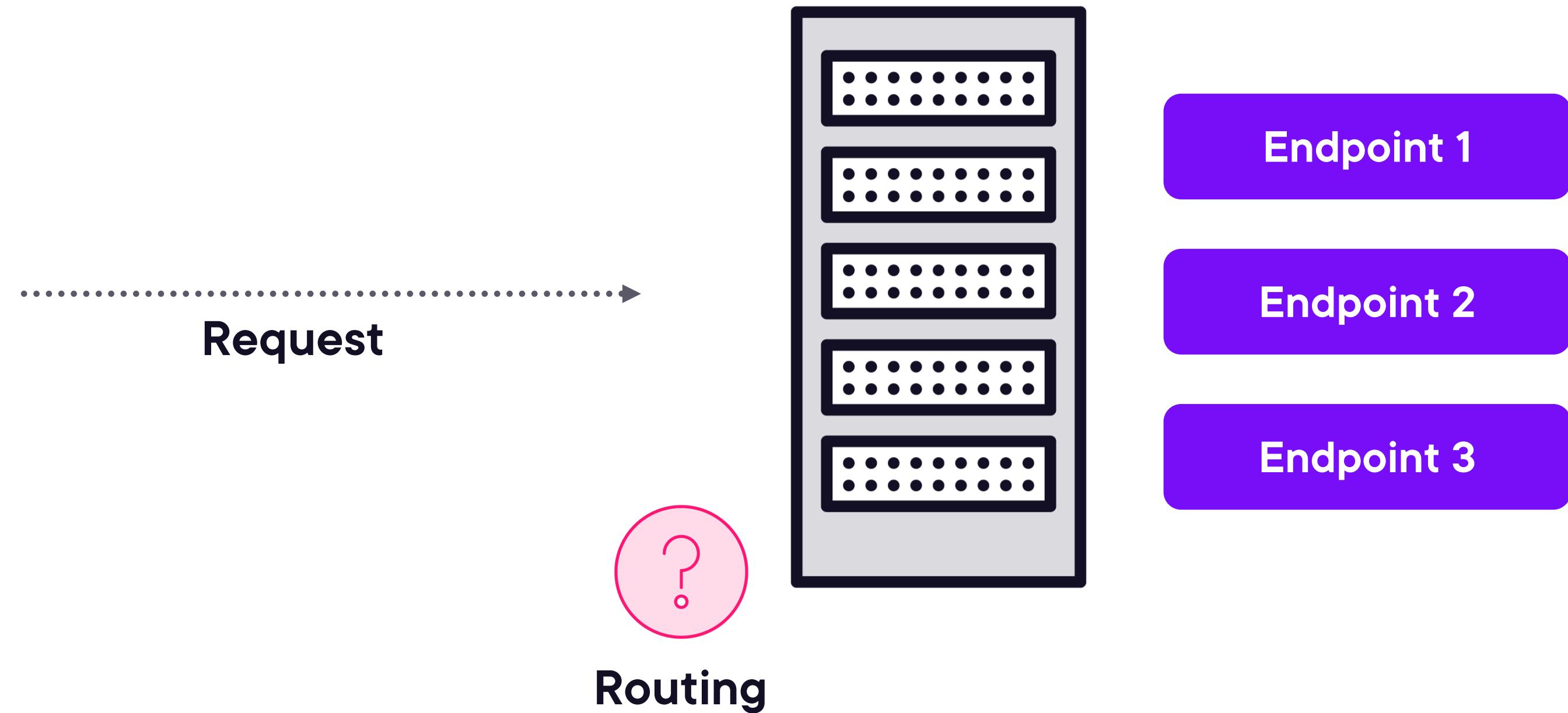
Routing in ASP.NET Core and ASP.NET Core MVC



Serving Files from a Server



Handling Requests in ASP.NET Core



```
var builder = WebApplication.CreateBuilder(args);
var app = builder.Build();

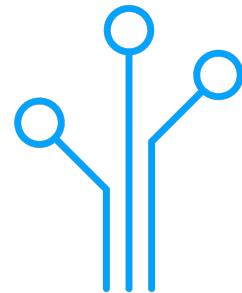
app.MapGet("/", () => "Hello World!");

app.Run();
```

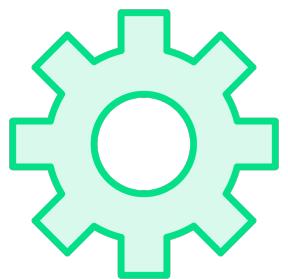
Routing in ASP.NET Core



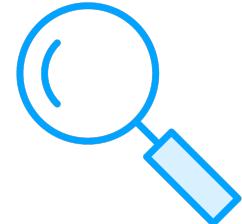
Endpoints in ASP.NET Core



Executable units that can handle a request



Defined in app using configuration (Program)



Matching process gives access to values from URL of request



Middleware for Routing

UseRouting()

UseEndpoints()



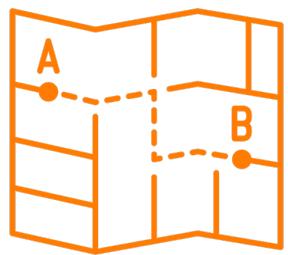
Routing in ASP.NET Core MVC



Match URL of request with template



Defined in Program.cs



Mapped to action on controller



Also used to generate outgoing links



Types of Routing

Convention-based

Attribute-based



Convention-based Routing



```
app.MapControllerRoute(name: "default", pattern: "{controller}/{action}");
```



Routing to the Action Method

```
public class PieController : Controller
{
    public ViewResult List()
    {
        ...
    }
}
```



Convention-based Routing



```
app.MapControllerRoute( name: "default", pattern: "{controller}/{action}/{id}");
```



Passing a Value

```
public class PieController : Controller
{
    public ViewResult Details(int id)
    {
        //Do something
    }
}
```



```
app.MapDefaultControllerRoute();
```

Using MapDefaultControllerRoute



Demo



Using routes in the application



Configuring Routes



```
app.MapControllerRoute(name: "default", pattern: "{controller=Home}/{action=Index}");
```

Using Route Defaults



```
app.MapControllerRoute(  
    name: "default",  
    pattern: "{controller=Home}/{action=Index}/{id}" );
```

Passing Values



```
app.MapControllerRoute(  
    name: "default",  
    pattern: "{controller=Home}/{action=Index}/{id?}");
```

Optional Segments

Will match:

- [www.bethanyspieshop.com/Pie/List](http://www.bethanyspieshop.com/Pie>List)
- www.bethanyspieshop.com/Pie/Details/1



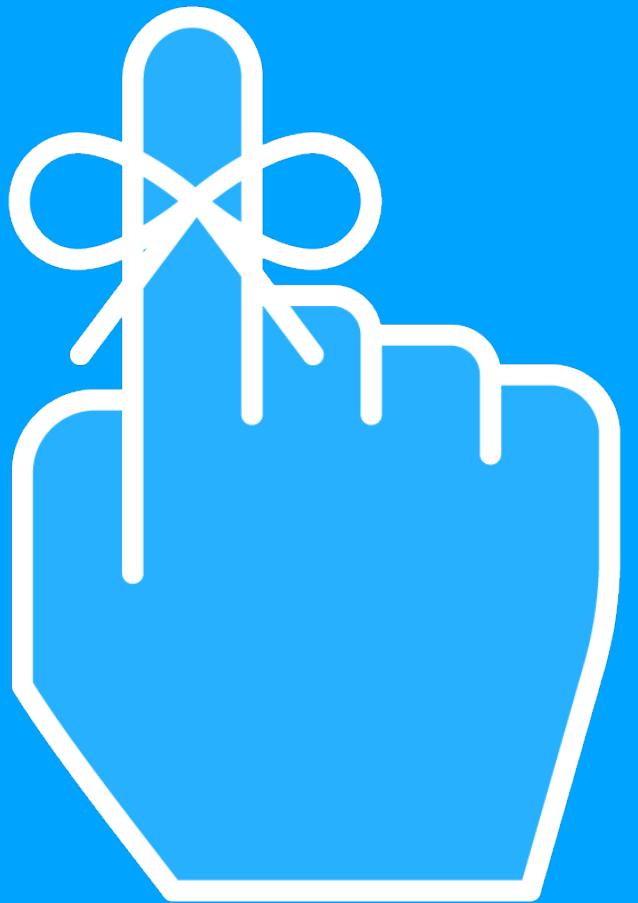
```
app.MapControllerRoute(  
    name: "default",  
    pattern: "{controller=Home}/{action=Index}/{id:int?}");
```

Adding Constraints



Navigating with Tag Helpers





**We need to generate
correct links in the
resulting HTML.**



```
<a asp-controller="Pie" asp-action="List">  
    View Pie List  
</a>
```

Creating a Link with Tag Helpers



Introducing Tag Helpers



Server-side

Trigger code execution

Look like standard HTML

Replace HTML Helpers

Built-in or custom



```
<a asp-controller="Pie" asp-action="List">  
    View Pie List  
</a>
```

Tag Helpers for Navigation



```
<a href="/Pie/List">View Pie List</a>
```

The Resulting HTML

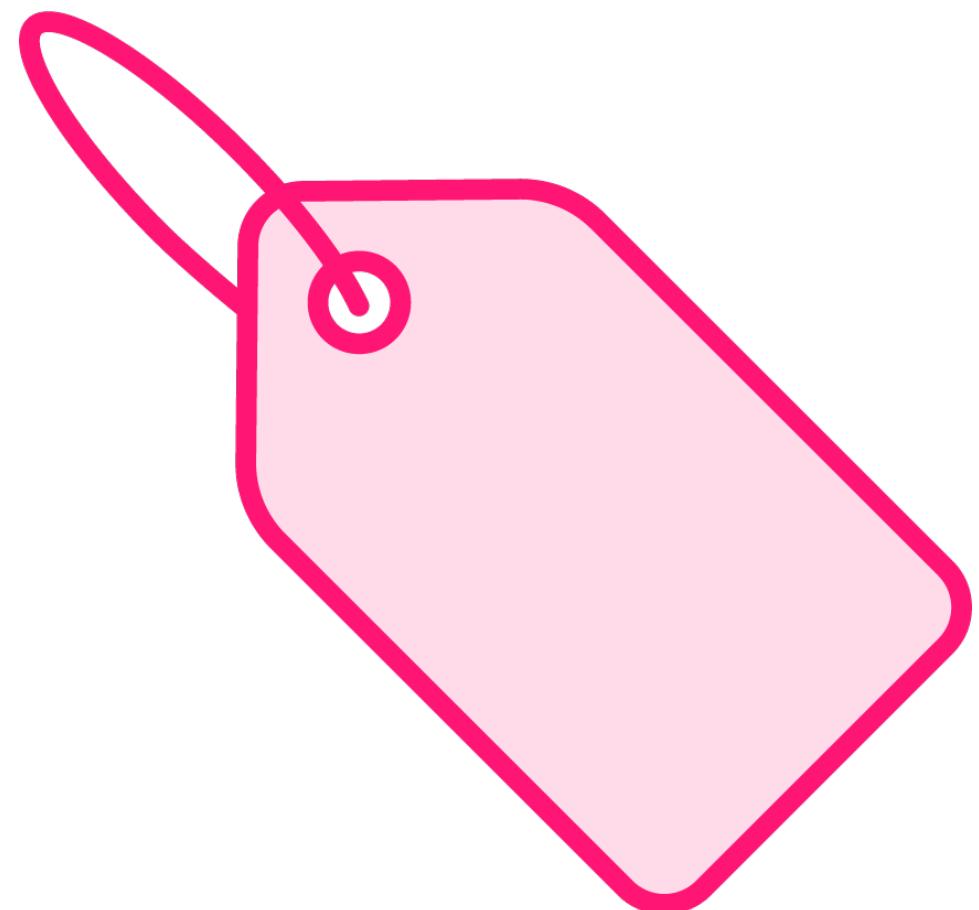


Registering Your Tag Helpers

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



Anchor Tag Helpers



Available attributes

- `asp-controller`
- `asp-action`
- `asp-route-*`
- `asp-route`



Demo



Adding navigation to the site



Summary



Routing matches incoming request URI with pattern

Tag Helpers help to create clean code

- Also for links



Up Next:

Improving the views

