Creating the List Page

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Overview

- Hello MVC
- Creating the model and the repository
- Creating the controller
- Adding the view
- Styling the view

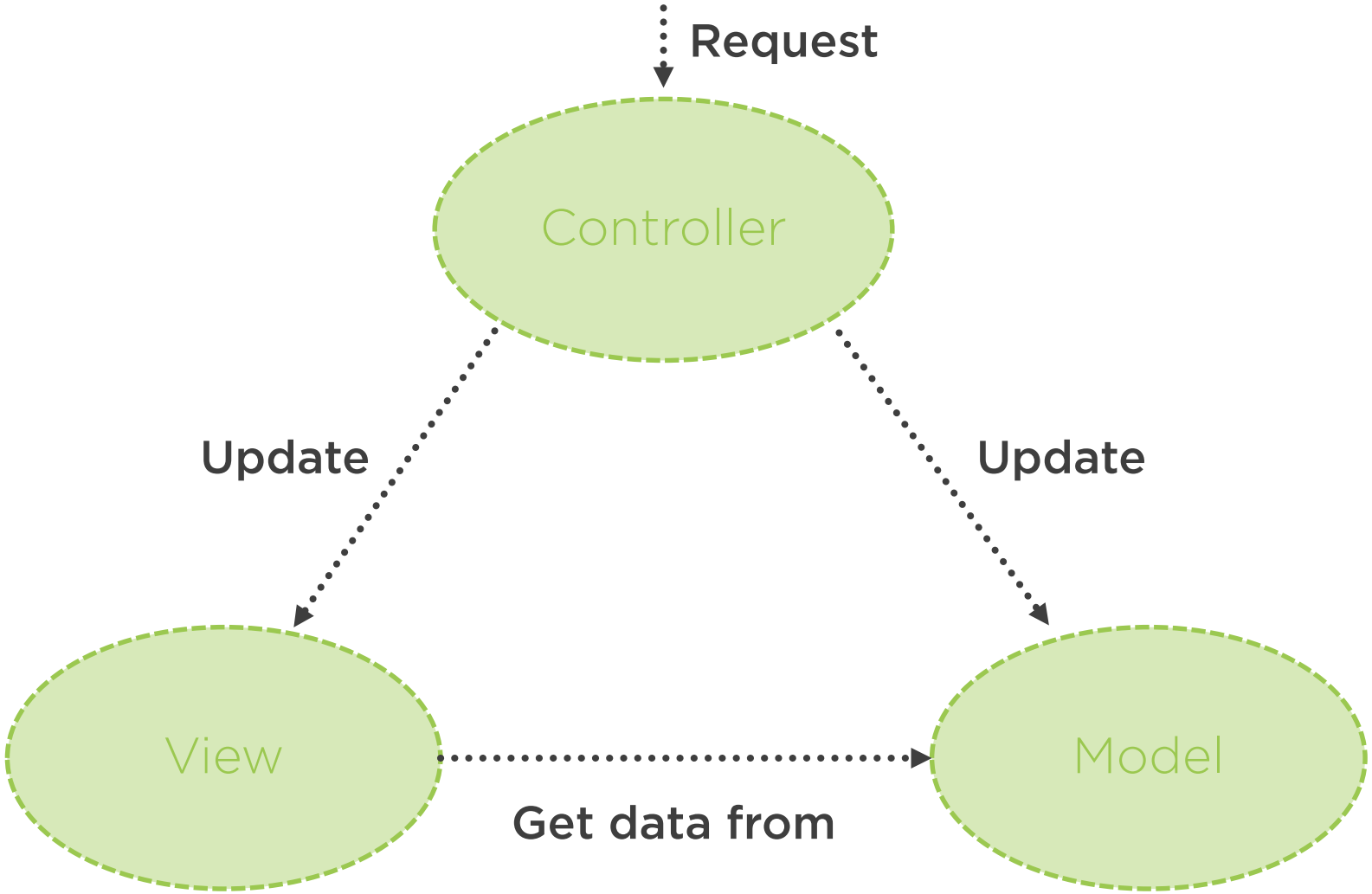
Hello MVC

The MVC in ASP.NET Core MVC

Model-View-Controller

- Architectural pattern
- Separation of concerns
- Promotes testability and maintainability

The MVC in ASP.NET Core MVC



Creating the Model and the Repository

The Model

Domain data + logic to manage data

Simple API

Hides details of managing the data

Sample Model class

```
public class Pie
{
    public int Id { get; set; }
    public string Name { get; set; }
    public string ShortDescription { get; set; }
    public string LongDescription { get; set; }
    public decimal Price { get; set; }
    public string ImageUrl { get; set; }
    public string ImageThumbnailUrl { get; set; }
    public bool IsPieOfTheWeek { get; set; }
}
```

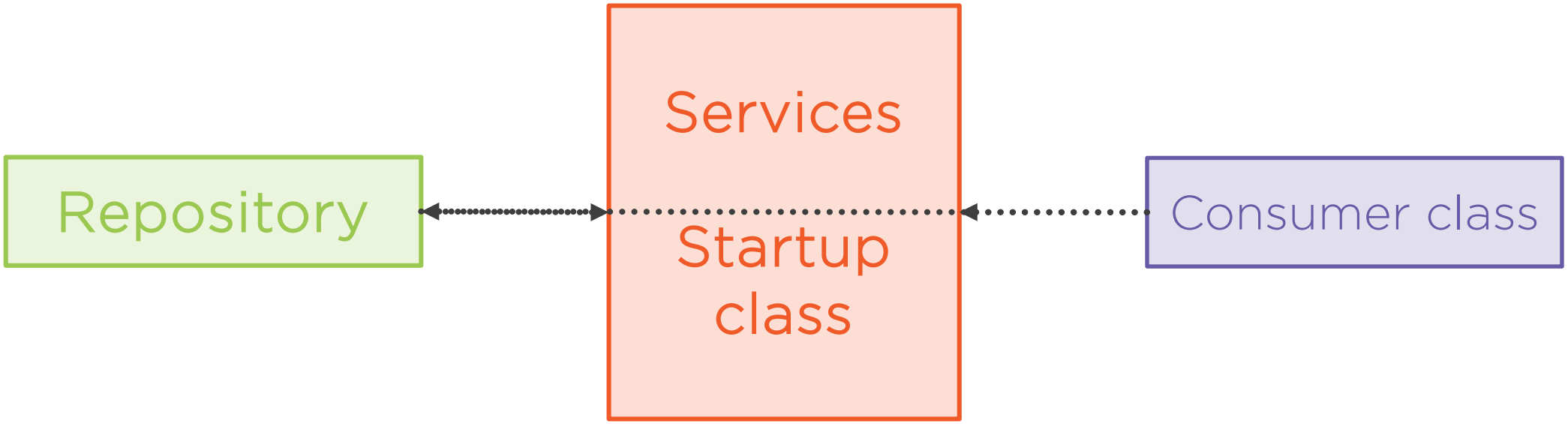
The repository allows our code to use objects without knowing how they are persisted

```
public interface IPieRepository
{
    IEnumerable<Pie> GetAllPies();
    Pie GetPieById(int pieId);

}
```

Pie Repository Interface

Registering the Repository

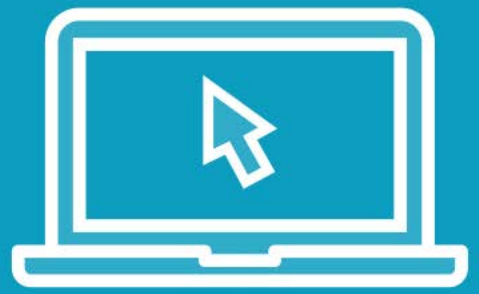


```
public void ConfigureServices(IServiceCollection services)
{
    //register framework services
    services.AddMvc();

    //register our own services
    services.AddTransient<IPieRepository, MockPieRepository>();
}
```

Registering Services in ConfigureServices

Demo



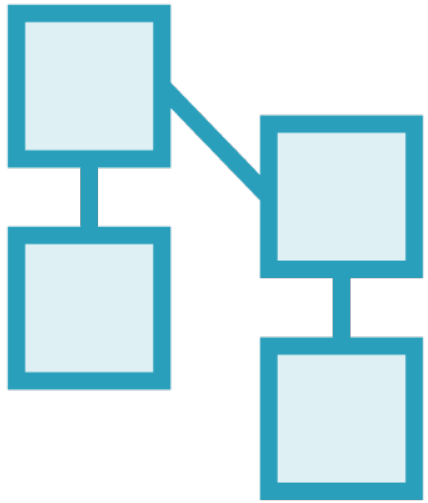
Creating the domain

Adding the repository

Creating the Controller

Tasks of the Controller

Respond to user interaction



Update model

No knowledge about data persistence

A Simple Controller

```
public class PieController : Controller
{
    public ViewResult Index()
    {
        return View();
    }
}
```

Action

View to show

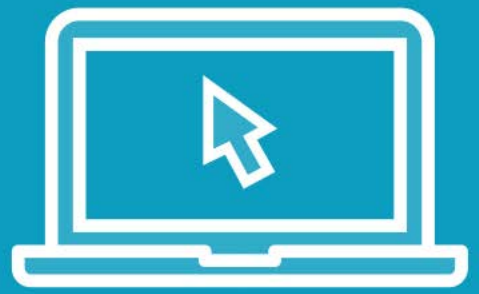
A Real Controller

```
public class PieController : Controller
{
    private readonly IPieRepository _pieRepository;

    public PieController(IPieRepository pieRepository)
    {
        _pieRepository = pieRepository;
    }

    public ViewResult List()
    {
        return View(_pieRepository.Pies);
    }
}
```

Demo



Adding the controller

Adding the View

The View

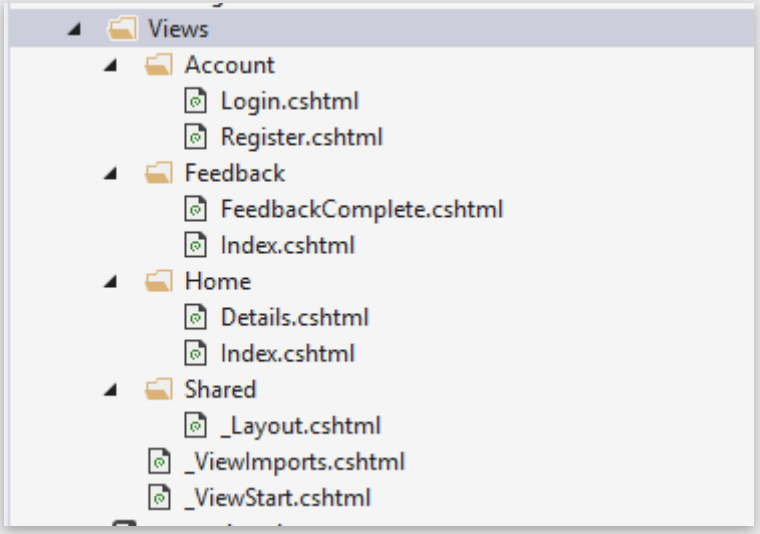
HTML template

- *.cshtml

“Plain” or strongly-typed

Uses Razor

View Folder Structure



Matching the Action With the View

```
public class PieController : Controller
{
    public ViewResult Index()
    {
        return View();
    }
}
```

Action

View to show: Index.cshtml

Using ViewBag from the Controller

```
public class PieController : Controller
{
    public ViewResult Index()
    {
        ViewBag.Message = "Welcome to Bethany's Pie Shop";
        return View();
    }
}
```

Dynamic Content Using ViewBag

```
<!DOCTYPE html>
<html>
  <head>
    <title>Index</title>
  </head>
  <body>
    <div>
      @ViewBag.Message
    </div>
  </body>
</html>
```

Calling a Strongly-typed View

```
public class PieController : Controller
{
    public ViewResult List()
    {
        return View(_pieRepository.Pies);
    }

}
```

A Strongly-typed View

```
@model IEnumerable<Pie>

<html>
…
  <body>
    <div>
      @foreach (var pie in Model.Pies)
      {
        <div>
          <h2>@pie.Name</h2>
          <h3>@pie.Price.ToString("c")</h3>
          <h4>@pie.Category.CategoryName</h4>
        </div>
      }
    </div>
  </body>
</html>
```

_Layout.cshtml

Template

Shared folder

More than one can be created

_Layout.cshtml

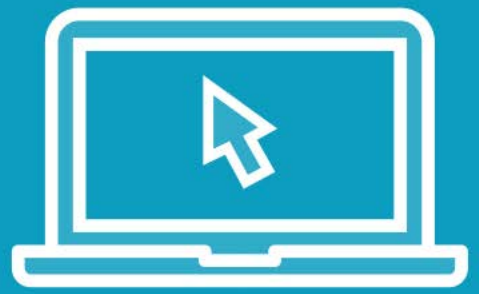
```
<!DOCTYPE html>
<html>
    <head>
        <title>Bethany's Pie Shop</title>
    </head>
    <body>
        <div>
            @RenderBody()
        </div>
    </body>
</html>
```

Replaced with view

```
@{
    Layout = "_Layout";
}
```

_ViewStart.cshtml

Demo



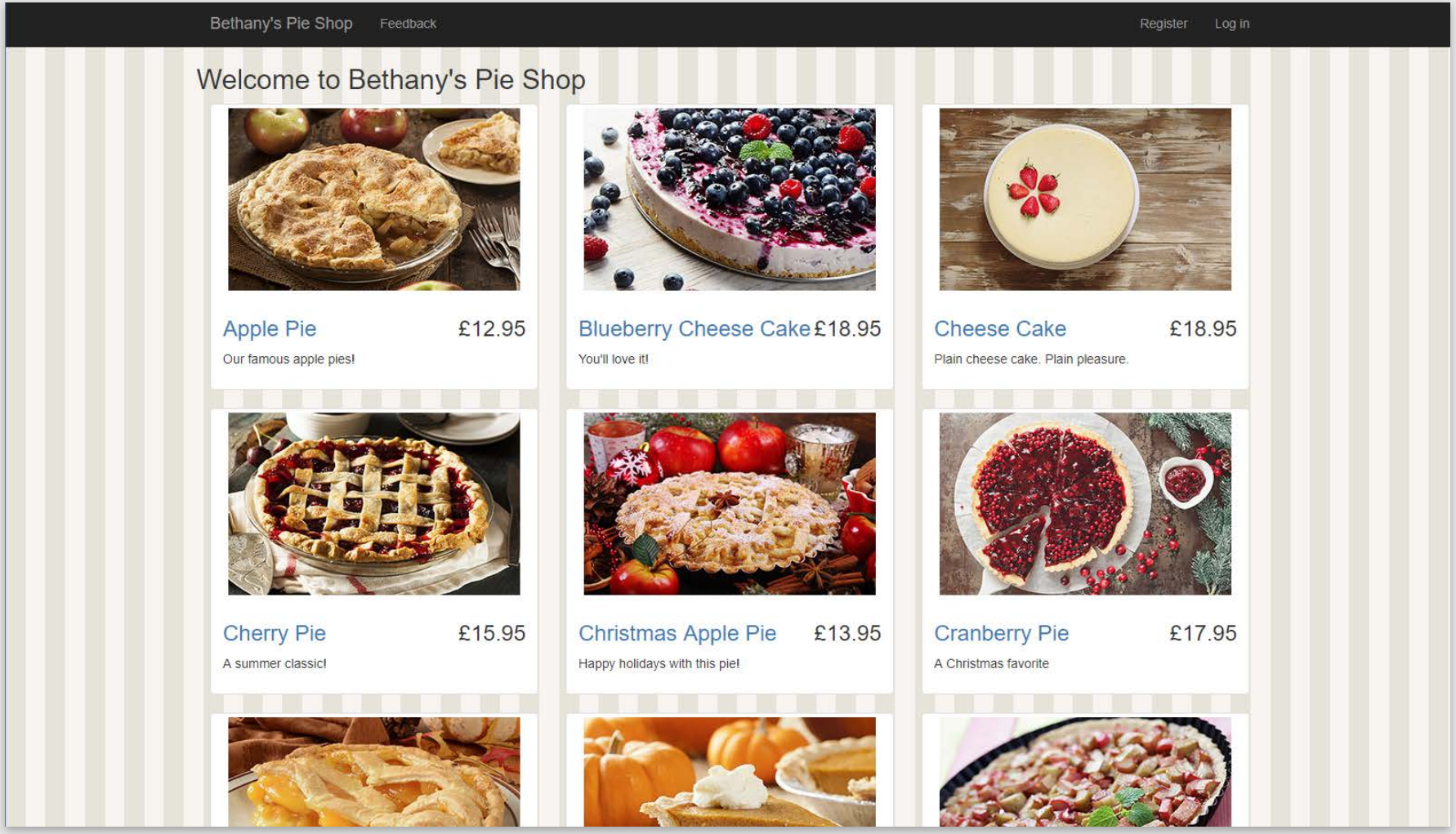
Creating the view

Adding a layout template

Creating the ViewStart file

Styling the View

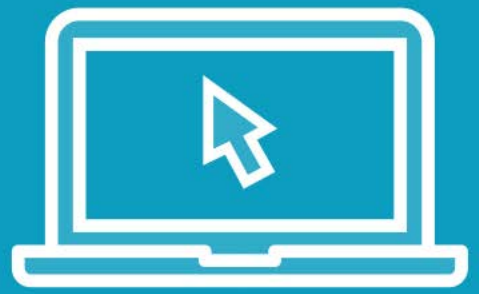
Where We Need to Get



Current state of client package managers in Visual Studio 2017

- Bower
- npm
- ...

Demo



Using Bower from Visual Studio

Adding Bootstrap

Summary

Building a complete page

- M
- V
- C

Styling using Bower

Up next:
Adding Entity Framework Core