Working with Real Data Using Entity Framework Core

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Overview

Hello EF Core

Adding EF Core to the application

Initializing the database

Modifying the model

Hello EF Core

Entity Framework Core (EF Core)

ORM

LINQ support

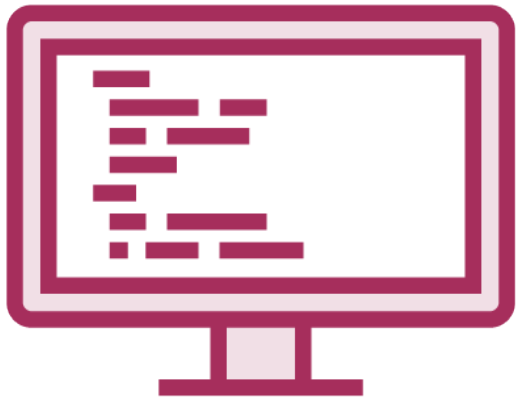
Lightweight & Cross-platform

Open-source

SQL Server and other, non-relational DB support

Code-first

EF Core



Code

Entity Framework

Database

What EF Core Does for You

Class

```
public class Pie
{
    public int PieId { get; set; }
    public string Name { get; set; }
    public string Description { get; set; }
}
```

Table

PieId	Int (PK)
Name	String
Description	string

Adding EF Core to the Application

Adding EF Core to the Application

Domain classes

Database context

Application configuration

Packages (.NET Core 3)

The Database Context

```
public class AppDbContext : DbContext
{

    public AppDbContext
        (DbContextOptions<AppDbContext> options): base(options)
    {
    }

     public DbSet<Pie> Pies { get; set; }

}
```

Adding EF Core to the Application

Domain classes

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Packages (.NET Core 3)

Connection String in AppSettings.json

```
{
    "ConnectionStrings": {
        "DefaultConnection":
            "Server=(localdb)\\mssqllocaldb;
            Database=BethanysPieShop;
            Trusted_Connection=True;
            MultipleActiveResultSets=true“
    }
}
```

Startup Changes

```
public void ConfigureServices(IServiceCollection services)
{
    services.AddDbContext<AppDbContext>(options =>
        options.UseSqlServer(
            Configuration.GetConnectionString
            ("DefaultConnection")));
}
```

Adding EF Core to the Application

Domain classes

Database context

Application configuration

Packages (.NET Core 3/5)

Demo

Adding the required packages

Creating the DbContext

Changing the application configuration

```
_appDbContext.Pies.
  Include(c => c.Category).Where(p => p.IsPieOfTheWeek);
```

Querying for Data

Modifying Data

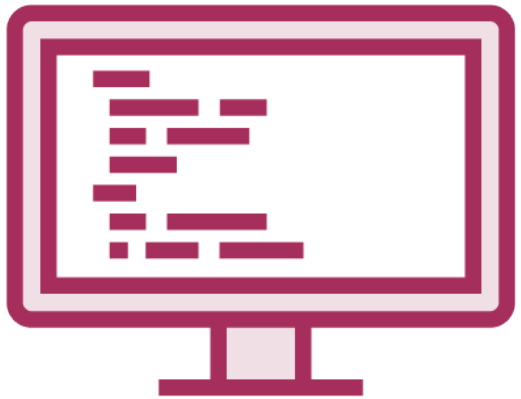
```
foreach (var shoppingCartItem in shoppingCartItems)
{
    var orderDetail = new OrderDetail
    {
        Amount = shoppingCartItem.Amount,
        PieId = shoppingCartItem.Pie.PieId,
        Price = shoppingCartItem.Pie.Price
    };
    order.OrderDetails.Add(orderDetail);
}

_appDbContext.Orders.Add(order);

_appDbContext.SaveChanges();
```

Demo

Creating the real repository

Creating and Initializing the Database

Creating the Database



Database migration

Package Manager Console

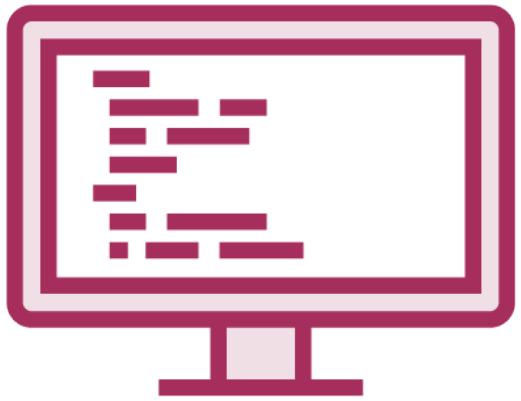
Create database

Database

Commands

```
>add-migration <MigrationName>
>update-database
```

Initializing the Database



HasData() on the
DbContext (migration)

Initial data

Database

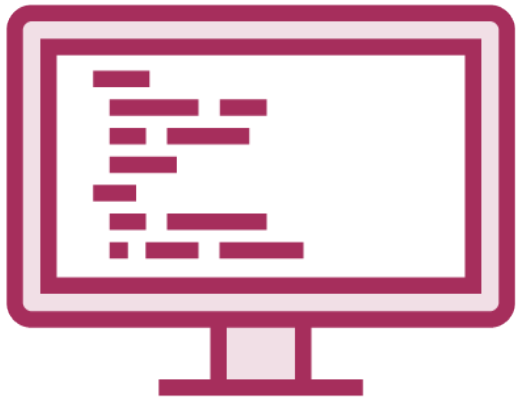
Demo

Creating the database

Initializing the database

Modifying the Model

Modifying the Model



Model change

Database migration

Update database

Database

Commands

```
>add-migration <MigrationName>
>update-database
```

Demo

Modifying the model

Updating the database

Summary

EF Core is the ORM for ASP.NET Core MVC applications

Code-first

Migrations are used to create and modify the database

Up next:
Adding navigation to the site