

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

Field	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; }
}
```



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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

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Packages (.NET Core 3)



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,
        Pield = shoppingCartItem.Pie.Pield,
        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

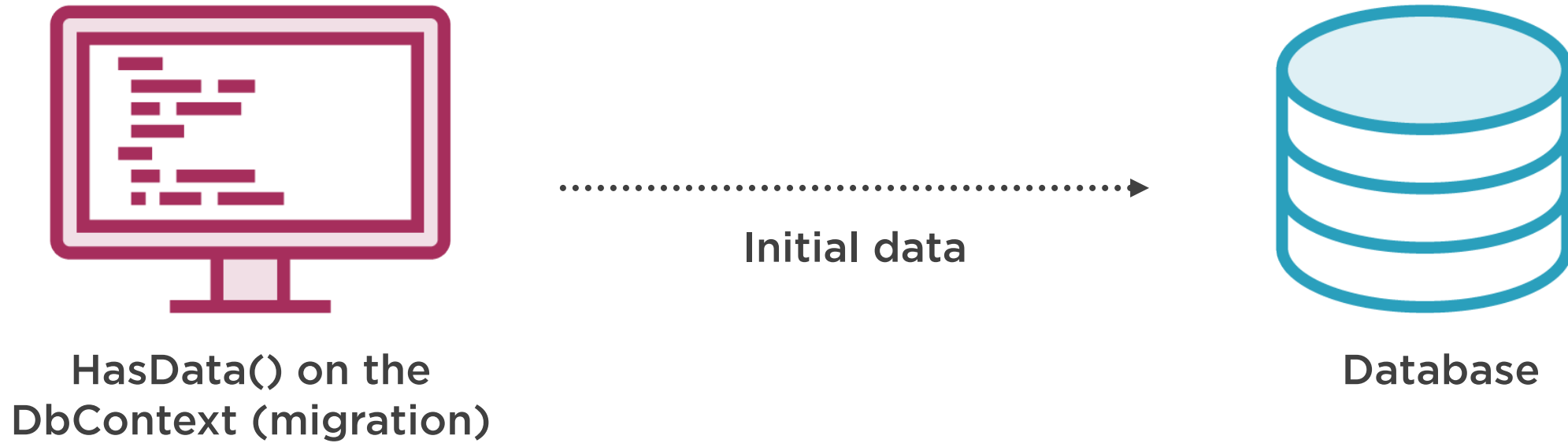


Commands

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



Initializing the Database



Demo



Creating the database

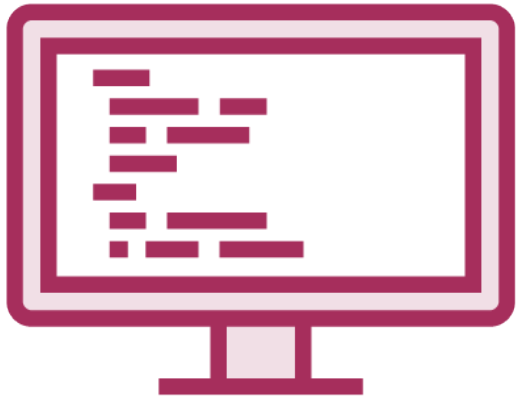
Initializing the database



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

