**Visual Studio Toolbox**

**Entity Framework Core**

How to use entity framework core

https://channel9.msdn.com/Shows/Visual-Studio-Toolbox/Entity-Framework-Core-Part-1

Part 1

**Overview**

What is EF?

EF – is an ORM (Object-relational mapper)

EF is less about talking to the database, and more about how you get to work with the data in your app.

What is an ORM?

ORM (mapper) converts what is good for the database (relational) into what is good for the application (object).

What our application needs and what is optimized for the database

**Relational**

* Databases tend to store their data very relationally (relational databases)
* Normalized (specialized) tables based on the data:
  + Customer table, Products table

**Object**

* But applications don’t work that way, we tend to work with domain objects (models)
* Looking at a customer, also want to their orders, and order details, and the products related

EF vs EF Core

* Complete rewrite of classic version
* Similar in name, goal, use
* Both use ADO.NET/ Core under the covers
  + Still using data providers, connections, command objects. It’s just abstracted away.

Data access can be thought of as plumping, almost every application needs it. You want to streamline “data access”, to spend more time on other functionality, and less time on the plumping.

EF is the plumping that every application needs, but we don’t want to build.

The goal always is to spend less time writing plumping code and more time writing business logic that’s useful for the app.

Use

Two different paradigms of using EF.

1 You have this existing database and you want to start using EF Core to query the data and to work with data, but how does that work? Because we only have the thing called “code first”.

Code first - really means code centric.

EF classic

4 ways of talking to a database

Designer from an existing database

Designer with no database

Code first with an existing database

Code first with no database

EF is very modular only pull down what you need.

(Relational, Abstractions, Analyzers, Design, SqlServer, Tools)

NuGet Package Manager:

Search for (Microsoft.EntityFrameworkCore)

Click on (Microsoft.EntityFrameworkCore.SqlServer)

Starting with an existing database (AdventureWorks2016)

Create all objects that we need with the scaffolding process

Scaffolding

Run a command line interface process that will take the existing database and create all of the EF objects that we need to work with it.

The command line interface is “the queen of the root”, you can do everything you need to do with .NET Core and EF Core from the command line. And you can do most of what you need to from Visual Studio. The command line comes first, and Visual Studio follows.

.NET Core global tool

Similar to .NET Classic, putting something into global assembly cache (GAC) stores. So you can access it from anywhere.

To run any of the command line tools in EF Core, you need to install the global tool for EF Core.

NET Global Assembly Cache