Contents

[ORM 2](#_Toc146294703)

[Entity Framework Core 6.x 2](#_Toc146294704)

[Course Link 2](#_Toc146294705)

[Nuget Packages 3](#_Toc146294706)

[In Data Access 3](#_Toc146294707)

[In Web tier 3](#_Toc146294708)

[Make Migrations 3](#_Toc146294709)

[Primary Key Set 3](#_Toc146294710)

[Required properties 3](#_Toc146294711)

[Snapshot File 3](#_Toc146294712)

[Remove Migration or Update existing Table. 3](#_Toc146294713)

[Remove a table 3](#_Toc146294714)

[Roll back to old migration 3](#_Toc146294715)

[More Commands 4](#_Toc146294716)

[Seed Data 4](#_Toc146294717)

[Data annotations 4](#_Toc146294718)

[EF Core Power Tools 4](#_Toc146294719)

[Relations in EF Core 6](#_Toc146294720)

[One to One 6](#_Toc146294721)

[One To Many 6](#_Toc146294722)

[Many to Many automatic 7](#_Toc146294723)

[Many to Many creating intermediate table. 7](#_Toc146294724)

# ORM

Object relational mapper. It is a technique that lets you query and manipulate data from database using an object-oriented-programing paradigm.

# Entity Framework Core 6.x

It is the new version of entity framework. It helps us to bring models from database and vice versa.

# Course Link

<https://dotnetmastery.com/Home/Details?courseId=11>

<https://github.com/bhrugen/CodingWiki_EF>

# Nuget Packages

## In Data Access

Microsoft.EntityFrameworkCore.SqlServer, this one include Microsoft.EntityFrameworkCore (the main one)

Microsoft.EntityFrameworkCore.Tools, this include Microsoft.EntityFrameworkCore.Desing

## In Web tier

Microsoft.EntityFrameworkCore.Desing

# Make Migrations

Make sure of **start project** and **default project.**

1. Set dataAccess start project
2. Command “**add-migration**” + a tag name example “CreatingBookTable”
3. Command “**Update-Database**” to create all object in the migration

## Primary Key Set

1. If the table only has one integer property with name ID
2. with [Key]
3. If the table only has one integer property THAT ENDS IN ID

## Required properties

If we do not put a property nullable It will assume that property as required

## Snapshot File

It has information about all migrations made.

# Remove Migration or Update existing Table.

It is recommend for non-updated migrations “**remove-migration**”

## Remove a table

Remove the dataset from dbcontext

## Roll back to old migration

Using “Update-Database” + the migration .cs file without date part of the name.

example “**Update-Database creatingBookTable**”

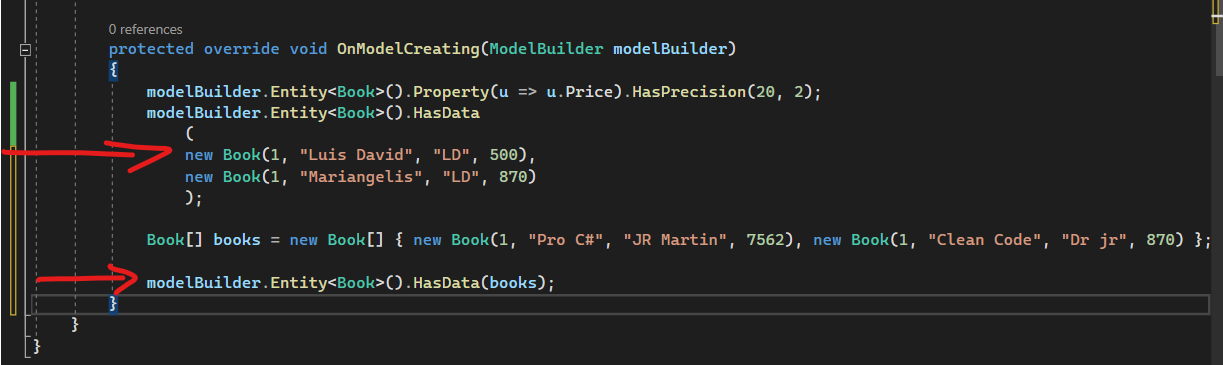
Then Just type “**Update-Database**” to applicate all migrations to database

# More Commands

1. **Get-migration** show up all migrations in console
2. **Drop-database** drop the database that is in connection string

# Seed Data

Create data and attach it to .HasData(), then add-migration

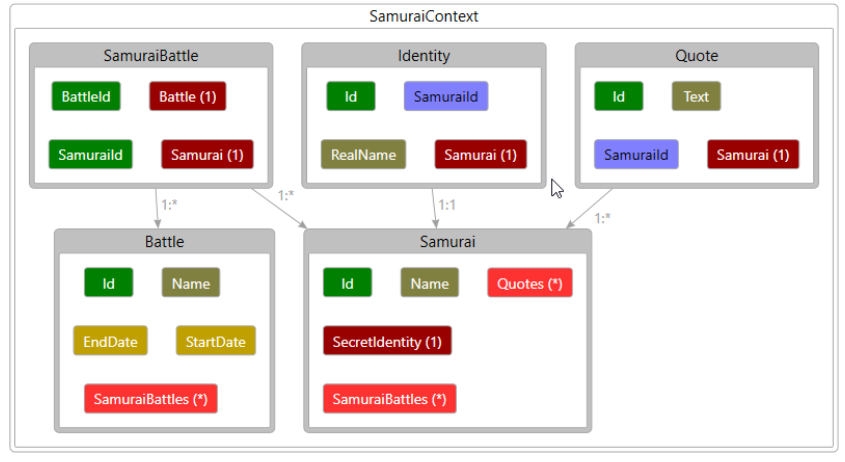


# Data annotations

1. Table name **[Table(“tb\_Category”)]**
2. Column name **[Column(“tb\_Category”)]**
3. **[Required]** put some column required.
4. **[Key]** put primary key.
5. **[MaxLength(50)]** varchar(50)
6. **[NotMapped]** It property is not added as new column
7. **[ForeignKey(“PropertyName from base foreign key table”)]**

# EF Core Power Tools

To create Table diagram in visual studio

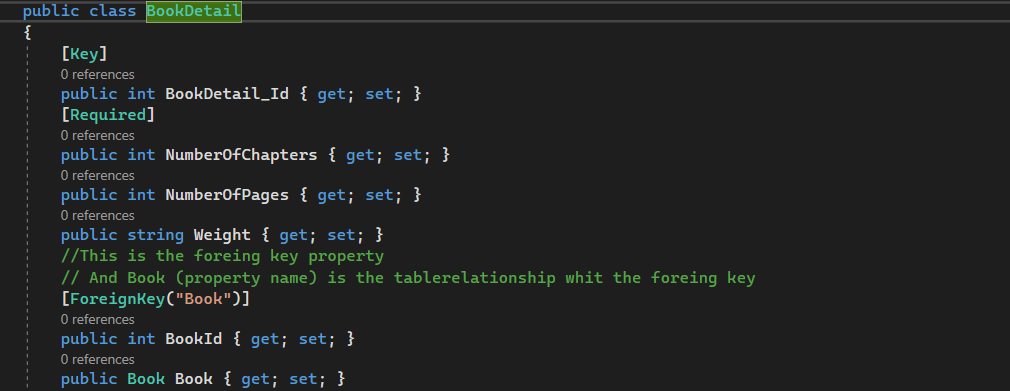


# Relations in EF Core

## One to One

Example BookDetail has a foreign key to Book.

1. Create a [ForeignKey(“Book”)] Book is the property name from the base table
2. Create property foreign key
3. Create property table base of foreign key
4. Create BookDetail property in Book



A screen shot of a computer

Description automatically generated

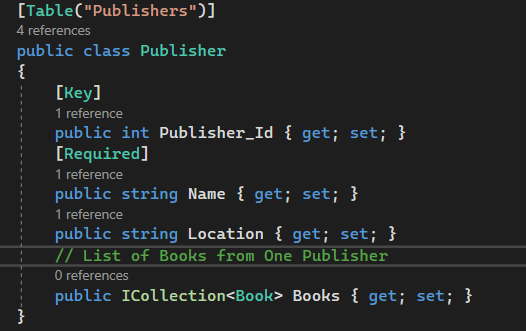
## One To Many

One **publisher** can have many **books**.

1. **Publisher\_Id** and Publisher **navigation** property in Book
2. **List<Book>** in Publisher, because One publisher can have many books

A screen shot of a computer code

Description automatically generated



## Many to Many automatic

One **Book** can have multiples **Authors**. One Author can have multiples Books.

1. List of Book in Author
2. List of Author in Book

EF Core 6.x Create an **intermediate table** itself.

## Many to Many creating intermediate table.

1. Create BookAuthor Table with bookId and authorId. And Author and Book references
2. Property virtual Icollection<BookAunthor> in Book
3. Property virtual Icollection<BookAunthor> in Author
4. Compose primary key in OnModelCreating

