.Net Core 3.1 MVC w/MySQL Cheat Sheet

by B C Williams | Dev (Jackfruit)via cheatography.com/146421/cs/31670/

Step 1 - Terminal

`dotnet tool install --global dotnet-ef`	You will only ever need to run this once as it is a global install not project specific
`dotnet new mvc --no-https -o Projec tDi rec tor yN ame`	Creates new dotnet MVC Project for development

Step 2 - Terminal (Inside Project Directory)

`dotnet add package Pomelo.En tit yFr ame wor kCo re.M ySql --version 3. 1.1`	Entity Framework Core provider for MySQL DB's
`dotnet add package Micros oft.En tit yFr ame wor kCo re.D esign --versi on 3.1.5`	EF Core tools for DB creation/migration

These two commands must be run in your project folder every time you set up a new MVC project!

Step 3 - appsettings.json && Startup.cs

```
" DBI nfo ":
    {
        " Nam e": " MyS QLc onn ect ",
        " Con nec tio nSt rin g": " ser ver =lo cal hos t;u ser id= roo t;p ass wor d=r oot ;po rt= 330 6;d
=SchemaName;SslMode=None"
}
```

```
using Micros oft.En tit yFr ame wor kCore;
```

```
servic es.A dd DbC ont ext <My Con tex t>( options => option s.U seMySql (Confi gur ati on[ " DBI nfo :Co nn
S tri ng"]));
```

```
servic es.A dd Ses sion();
```

```
app.Us eSe ssi on();
```

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Step 4 - Context File

```
using Microsoft.EntityFrameworkCore;
namespace ProjDirName.Models
{
    public class DBContextClassName : DbContext
    {
        public DBContextClassName(DbContextOptions options) : base(options) { }
        public DbSet<ModelName> TableName { get; set; }
        Add more tables here
    }
}
```

Sample code for context model file

Step 5 - Model Example

```
using System;
using System.ComponentModel.DataAnnotations;
namespace ProjDirName.Models
{
    public class ModelName
    {
        [Key]
        public ModelNameId { get; set; }
        Set all properties here
        public DateTime CreatedAt { get; set; } = DateTime.Now;
        public DateTime UpdatedAt { get; set; } = DateTime.Now;
        Set Navigation Properties
    }
}
```

Class model for database table

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Step 6 - Context Dependency Injection

```
using System;
using System.Co lle cti ons.Ge neric;
using System.Linq;
using Micros oft.En tit yFr ame wor kCore;
using ProjDi rNameModels;
public HomeCo ntr olle r(Contex tCl assNameontext)
                {
                        _co ntext = context;
                }

                 [Ht tpG et( " ")]
                 public IActio nResult Index()
                {
                   ModelName> tVariab leName= _context.TableName.ToList();

                        return View();
                }
```

Sample of the code required to make DB Context available in controllers

Step 7 - Terminal - Migration

`dotnet ef migrations add Migrat ionName`	Creates a migration in preparation for Creating/Updating your DB Schema
`dotnet ef database update`	Updates Database schema with most recent migration

This step to be done after all previous steps are complete and, preferably, after all models and relationships are in place.

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