



# C# Web – MVC

## PRO - C# Web 1

### DE HOGESCHOOL MET HET NETWERK

Hogeschool PXL – Elfde-Liniestraat 24 – B-3500 Hasselt  
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# Doel

- ASP.Net Core toepassing
  - MVC Web Application
    - Entity framework – Sql server
      - Table reference keys
    - Configuration
      - Appsettings.json
    - Entity framework Tools
      - Migrations

# ASP.NET CORE

MVC Web Application  
Appsettings.json

Startup.cs

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

Appsettings.json

```
"ConnectionStrings": {
    "ApplicationDbContext": "Server=(localdb)\\mssqllocaldb;
        Database=fifa2021; Trusted_Connection=True;
        MultipleActiveResultSets=true"
}
```

# ASP.NET CORE

MVC Web Application  
Foreign key reference

```
public class TeamPlayer
{
    public int Id { get; set; }
    [Required]
    public int TeamId { get; set; }
    [Required]
    public int PlayerId { get; set; }
    [Required]
    public DateTime StartDate { get; set; }
    [Required]
    public DateTime EndDate { get; set; }

    public Team Team { get; set; }

    public Player Player { get; set; }
}
```

```
public class Player
{
    public int PlayerId { get; set; }
    [Required]
    public string FirstName { get; set; }
    [Required]
    public string LastName { get; set; }
    public string ImageLink { get; set; }

    public ICollection<TeamPlayer> TeamPlayers { get; set; }
}
```

```
public class Team
{
    public int TeamId { get; set; }
    [Required]
    public string TeamName { get; set; }
    public ICollection<TeamPlayer> TeamPlayers { get; set; }
}
```



# ASP.NET CORE

MVC Web Application  
EntityFramework - Tools  
Migrations

## Microsoft.EntityFrameworkCore.Tools

- Nuget Package Manager



**Microsoft.EntityFrameworkCore.Tools** ✓ by Microsoft, 111M downloads

v3.1.18

Entity Framework Core Tools for the NuGet Package Manager Console in Visual Studio.

v5.0.10

### Description

Entity Framework Core Tools for the NuGet Package Manager Console in Visual Studio.

Enables these commonly used commands:

Add-Migration  
Drop-Database  
Get-DbContext  
Scaffold-DbContext  
Script-Migrations  
Update-Database

**Version:** 3.1.19

- Delete database fifa2021
  - Remove Database.EnsureCreated() in app (TeamController & PlayerController)
- Nuget Package Manager console
  - Add-migration initial
  - Update-database

```
Package Manager Console
Package source: All
PM> add-migration initial
Build started...
Build succeeded.
To undo this action, use Remove-Migration.
PM> update-database
Build started...
Build succeeded.
```

```

migrationBuilder.CreateTable(
    name: "TeamPlayers",
    columns: table => new
    {
        Id = table.Column<int>(nullable: false)
            .Annotation("SqlServer:Identity", "1, 1"),
        TeamId = table.Column<int>(nullable: false),
        PlayerId = table.Column<int>(nullable: false),
        StartDate = table.Column<DateTime>(nullable: false),
        EndDate = table.Column<DateTime>(nullable: false)
    },
    constraints: table =>
    {
        table.PrimaryKey("PK_TeamPlayers", x => x.Id);
        table.ForeignKey(
            name: "FK_TeamPlayers_Players_PlayerId",
            column: x => x.PlayerId,
            principalTable: "Players",
            principalColumn: "PlayerId",
            onDelete: ReferentialAction.Cascade);
        table.ForeignKey(
            name: "FK_TeamPlayers_Teams_TeamId",
            column: x => x.TeamId,
            principalTable: "Teams",
            principalColumn: "TeamId",
            onDelete: ReferentialAction.Cascade);
    });

```

- Player creation
  - Update form
    - Add Combobox Teams
    - Create Model
    - Update Create Action

## Create

### Player

---

FirstName

LastName

ImageLink

TeamId

Create

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- Player creation
  - Update form
    - Add Combobox Teams
    - Create Model
    - Update Create Action

- New Model
  - NewPlayer.cs

```
public class NewPlayer : Player
{
    public int TeamId { get; set; }
}
```

## Create

### Player

FirstName

LastName

ImageLink

TeamId

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- PlayerController

```
[HttpGet]
public IActionResult Create()
{
    var player = new NewPlayer();
    ViewData["TeamId"] = new SelectList(_context.Teams,
    "TeamId", "TeamName");
    return View(player);
}
[HttpPost]
public IActionResult Create(NewPlayer player)
{
    if (ModelState.IsValid)
    {
        AddPlayer((Player)player);
        return RedirectToAction("Index");
    }
    return View(player);
}
```

## Create

### Player

FirstName

LastName

ImageLink

TeamId

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- Views/Player/Create.cshtml

```
@model MVCFifa2021.Models.NewPlayer
...
<div class="row">
  <div class="col-md-4">
    <form asp-action="Create">
      ...
      <div class="form-group">
        <label asp-for="TeamId" class="control-label"></label>
        <select asp-for="TeamId" class="form-control" asp-items="ViewBag.TeamId"></select>
      </div>
```

## Create

### Player

FirstName

Eden

LastName

Hazard

ImageLink

eden.jpg

TeamId

Real Madrid

Create

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- PlayerController

```
private void AddPlayer(NewPlayer player)
{
    Player p = (Player)player;
    _context.Players.Add(p);
    _context.SaveChanges();
    var tp = new TeamPlayer();
    tp.PlayerId = p.PlayerId;
    tp.TeamId = player.TeamId;
    tp.StartDate = DateTime.Now;
    _context.TeamPlayers.Add(tp);
    _context.SaveChanges();
}
```

## Create

### Player

FirstName

LastName

ImageLink

TeamId

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# ASP.NET CORE

**MVC Web Application – Oefening 08**  
**Afdelingen**