

# C# Web – MVC

# PRO/PRW - C# Web 1

#### DE HOGESCHOOL MET HET NETWERK

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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



MVC Web Application Configuration Appsettings.json

#### Program.cs

```
var builder = WebApplication.CreateBuilder(args);
var connString =
    builder.Configuration.GetConnectionString("ApplicationDbContext");
```

#### Appsettings.json

```
,"ConnectionStrings": {
    "ApplicationDbContext": "Server=(localdb)\\mssqllocaldb;
    Database=fifa2023; Trusted_Connection=True;
    MultipleActiveResultSets=true"
  }
```

**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; }
}
```



MVC Web Application EntityFramework - Tools Migrations

### Microsoft.EntityFrameworkCore.Tools (.Net 6)

Nuget Package Manager



#### 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

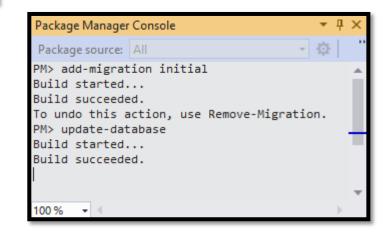
Scaffold-DbContext

Script-Migrations

Update-Database

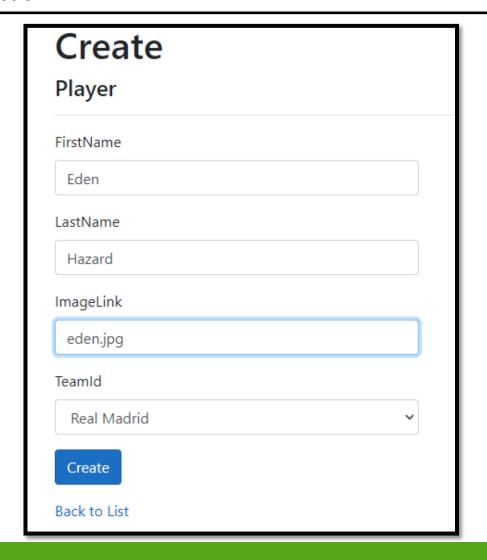
Version: 3.1.19

- Delete database fifa2023
  - Remove Database.EnsureCreated()
     (TeamController & PlayerController)
- Nuget Package Manager console
  - Add-migration initial
  - Update-database



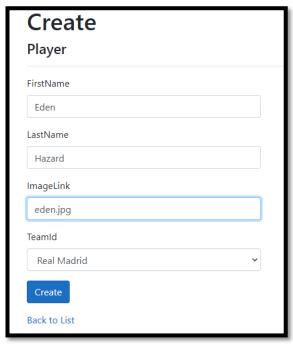
```
migrationBuilder.CreateTable(
    name: "TeamPlayers",
    columns: table => new
        Id = table.Column<int>(nullable: false)
            .Annotation("SqlServer:Identity", "1, 1"),
        TeamId = table.Column<int>(nullable: false),
        PlayerId = table.Column<int>(nullable: false),
        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
    - Add Create2 Action



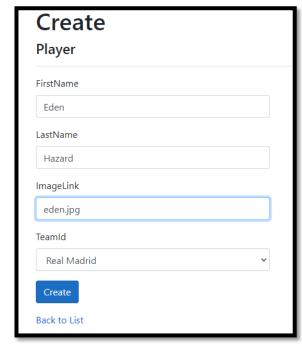
- Player creation
  - Update form
    - Add Combobox Teams
    - Create Model
    - Add Create2 Action
- New ViewModel (Project/ViewModels folder)
  - NewPlayer.cs

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

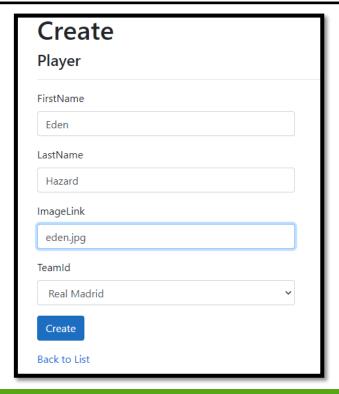


PlayerController

```
[HttpGet]
public IActionResult Create2()
   var player = new NewPlayer();
   ViewData["TeamId"] = new SelectList(_context.Teams,
"TeamId", "TeamName");
   return View(player);
[HttpPost]
public IActionResult Create2(NewPlayer player)
    if (ModelState.IsValid)
       AddNewPlayer(player);
        return RedirectToAction("Index");
   return View(player);
```

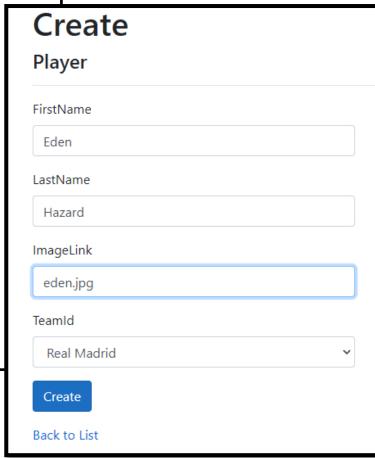


Views/Player/Create2.cshtml



PlayerController

```
private void AddNewPlayer(NewPlayer player)
     Player p = new Player();
    p.FirstName = player.FirstName;
     p.LastName = player.LastName;
     p.ImageLink = player.ImageLink;
     context.Players.Add(p);
     context.SaveChanges();
     var tp = new TeamPlayer();
     tp.PlayerId = p.PlayerId;
     tp.TeamId = player.TeamId;
     tp.StartDate = DateTime.Now;
  tp.EndDate = DateTime.Now.AddMonths(3);
     _context.TeamPlayers.Add(tp);
     context.SaveChanges();
```



- TeamController
  - List Template add hyperlink to PlayerOverview
  - New Action PlayerOverview
  - New View PlayerOverview
    - Show all players from 1/1/year(now)
      - TeamName FirstName LastName

<u>Players</u>	Index		
<u>Teams</u> <u>TeamPlayers</u>	Create New		
	TeamId	TeamName	
	1	PSG	<u>PlayerOverview</u>
	2	LA Galaxy	<u>PlayerOverview</u>

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