



C# Web – MVC

PRO - C# Web 1

DE HOGESCHOOL MET HET NETWERK

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Doel

- ASP.Net Core toepassing
 - MVC Web Application
 - TagHelper
 - ViewComponent
 - Styling
 - Identity Framework

ASP.NET CORE

MVC Web Application
MVCVoertuig

MVCVoertuig - NPM

- Nuget Package Manager
 - EntityFrameworkCore.SqlServer
 - EntityFrameworkCore.Tools

MVCVoertuig - Models

```
public class Voertuig
{
    public int VoertuigId { get; set; }
    [Required]
    public string Merk { get; set; }
    [Required]
    public string MerkType { get; set; }
    [Required]
    public int Bouwjaar { get; set; }
    [Required]
    public int Km { get; set; }
    [Column(TableName = "decimal(8, 2)")]
    public decimal VerkoopPrijs { get; set; }
    public bool AanwezigInShowroom { get; set; }
}
```

MVCVoertuig - Data

Project – Add Folder: Data

Data – Add class: VoertuigDbContext

```
public class VoertuigDbContext : DbContext
{
    public VoertuigDbContext(DbContextOptions<VoertuigDbContext>
options) : base(options) { }
    public DbSet<Voertuig> Voertuigen { get; set; }
}
```

MVCVoertuig – Data service

Startup.cs

```
public void ConfigureServices(IServiceCollection services)
{
    services.AddControllersWithViews();
    services.AddDbContext<VoertuigDbContext>(opts => {
        opts.UseSqlServer(
            Configuration["ConnectionStrings:VoertuigConnection"]);
    });
}
```

MVCVoertuig – conn string

Appsettings.json

```
,  
  "ConnectionStrings": {  
    "VoertuigConnection": "Server=(localdb)\\MSSQLLocalDB;  
      Database=MVCVoertuig; MultipleActiveResultSets=true"  
  }
```


MVCVoertuig - NPM

- Nuget Package Manager Console
 - Add-migration initial
 - Update-database

MVCVoertuig – Controller

Scaffold VoertuigenController


- `public IActionResult Index()`
 - `return View();`
 - `return View(voertuig);`
 - `return View(List<Voertuig>);`
- `IActionResult` verwijst in dit geval naar de folder `Views/Voertuigen` met de naam `Index.Cshtml`



MVCVoertuig – Model validation

VoertuigenController - Create

```
if (ModelState.IsValid)
{
    _context.Add(voertuig);
    _context.SaveChanges();
    return RedirectToAction(nameof(Index));
}
return View(voertuig);
```



MVCVoertuig – SeedData

Create static class SeedData in Data folder

Startup.cs

```
public void Configure(IApplicationBuilder app, IWebHostEnvironment env)
{
    ...
    app.UseEndpoints(endpoints =>
    {
        endpoints.MapControllerRoute(
            name: "default",
            pattern: "{controller=Home}/{action=Index}/{id?}");
    });
    SeedData.EnsurePopulated(app);
}
```

<http://localhost:5000/Voertuigen>

MVCVoertuig – TagHelpers

Create folder TagHelpers

- Add class HyperlinkButtonTagHelper
- Add class CarInfoTagHelper
- Update ViewImports in de Views/Shared folder

MVCVoertuig – TagHelpers

CarInfoTagHelper

Home/Index.cshtml

```
@{  
}  
<div>  
    <car-info></car-info>  
</div>
```

Aantal voertuigen 5

MVCVoertuig – ViewComponent

- Create folder Components
 - Add class HeaderMenuViewComponent
- Create folder Views/Shared/Components/HeaderMenu
 - Add empty razor view
 - Default.cshtml

MVCVoertuig – ViewComponent

- default.cshtml

```
@model IEnumerable<string>

<ul class="navbar-nav">
  <li class="nav-item">
    <a button-color="info" asp-controller="Home" asp-action="Index">Home</a>
  </li>
  <li class="nav-item">
    <a button-color="info" asp-controller="Voertuigen" asp-
action="Index">Voertuigen</a>
  </li>
  @foreach (string merk in Model)
  {
    <li class="nav-item">
      <a button-color="info" asp-controller="Voertuigen" asp-action="Merk"
asp-route-merk="@merk">@merk</a>
    </li>
  }
</ul>
```


MVCVoertuig – CarInfoTagHelper

- VoertuigenController

```
public IActionResult Merk(string merk)
{
    ViewBag.Merk = merk;
    return View(_context.Voertuigen.Where(x => x.Merk == merk));
}
```

- Add razor view in Views/Voertuigen

- List template
- Name: Merk.cshtml

```
@model IEnumerable<MVCVoertuig.Models.Voertuig>
@{
    ViewData["Title"] = "View";
    var merk = ViewBag.Merk;
}
<br />
<car-info merk="@merk"></car-info>
<br />
```

MVCVoertuig – ViewComponent

- Views/Shared/_Layout.cshtml

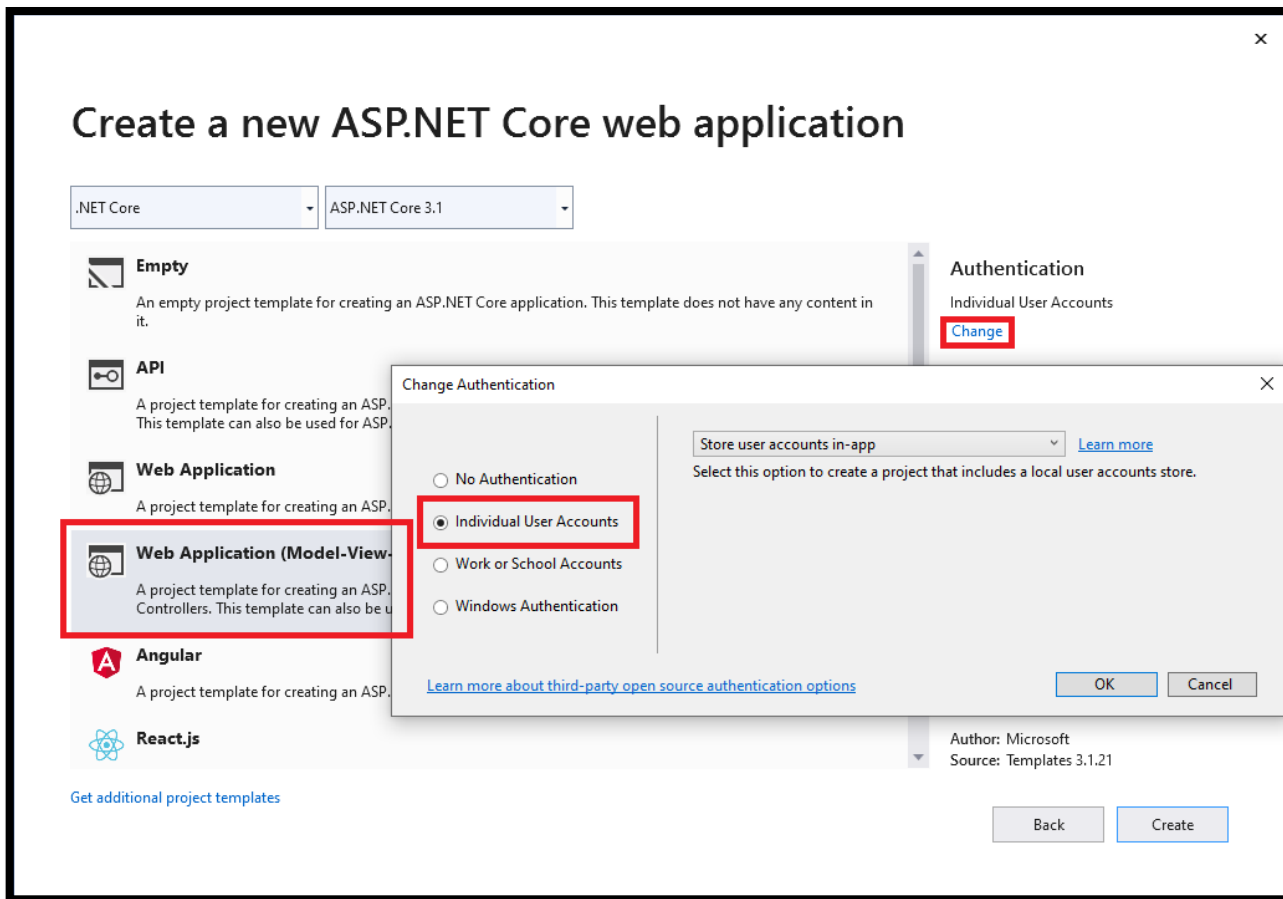
```
<header>  
    <nav class="navbar navbar-expand-sm bg-primary navbar-light">  
        <vc:header-menu></vc:header-menu>  
    </nav>  
</header>
```

ASP.NET CORE

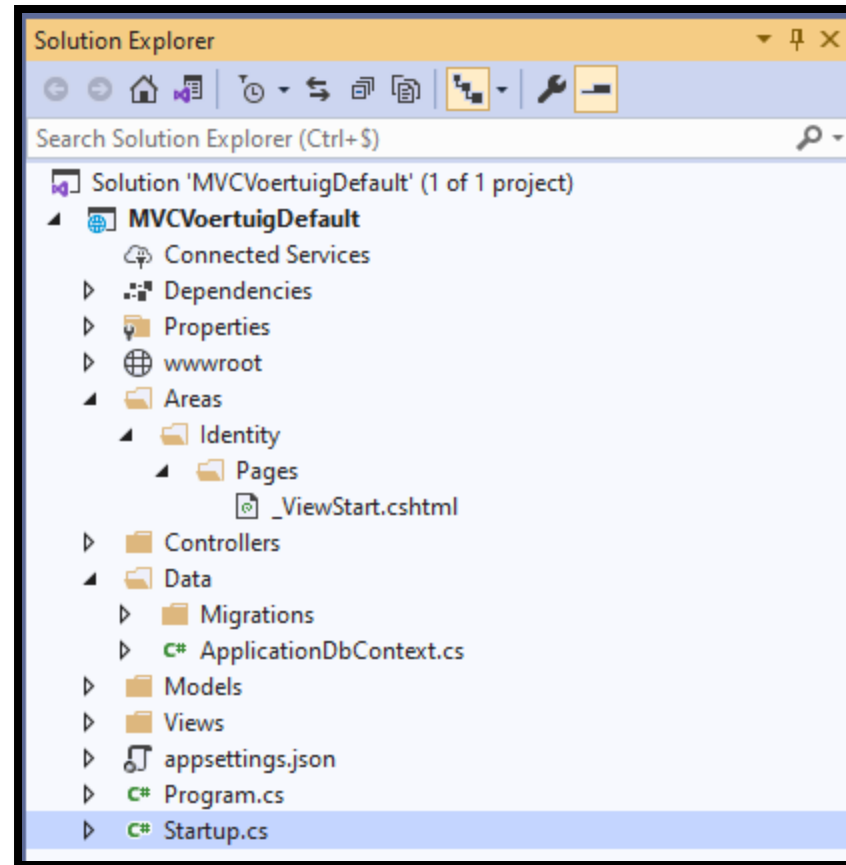
MVC Web Application
MVCVoertuigDefault

Identity Framework

- ASP.Net Core – MVC – MVCVoertuigDefault
- Authenticatie aanduiden



Identity Framework



Identity Framework

- ApplicationDbContext

```
public class ApplicationDbContext : IdentityDbContext
{
    public ApplicationDbContext(DbContextOptions<ApplicationDbContext> options)
        : base(options)
    {
    }
}
```

Identity Framework

- Startup.cs

```
public void ConfigureServices(IServiceCollection services)
{
    services.AddDbContext<ApplicationDbContext>(options =>
        options.UseSqlServer(
            Configuration.GetConnectionString("DefaultConnection")));
    services.AddDefaultIdentity<IdentityUser>(options =>
        options.SignIn.RequireConfirmedAccount = true)
        .AddEntityFrameworkStores<ApplicationDbContext>();
    services.AddControllersWithViews();
    services.AddRazorPages();
}
```

Identity Framework - Authentication

- Startup.cs

```
public void Configure(IApplicationBuilder app, IWebHostEnvironment env)
{
    ...
    app.UseAuthentication();
    app.UseAuthorization();
    app.UseEndpoints(endpoints =>
    {
        endpoints.MapControllerRoute(
            name: "default",
            pattern: "{controller=Home}/{action=Index}/{id?}");
        endpoints.MapRazorPages();
    });
    SeedData.EnsurePopulated(app);
}
```


Identity Framework

- Views/Shared
 - _Layout.cshtml

```
<header>
  <nav class="navbar navbar-expand-sm navbar-toggleable-sm
navbar-light bg-white border-bottom box-shadow mb-3">
    <div class="container">
      <div class="navbar-collapse collapse d-sm-inline-flex
flex-sm-row-reverse">
        <partial name="_LoginPartial" />
        <vc:header-menu></vc:header-menu>
      </div>
    </div>
  </nav>
</header>
```

Identity Framework

- Views/Shared
 - _LoginPartial.cshtml

@inject -> Dependency Injection in Views

```
@using Microsoft.AspNetCore.Identity
@inject SignInManager<IdentityUser> SignInManager
@inject UserManager<IdentityUser> UserManager

<ul class="navbar-nav">
@if (SignInManager.IsSignedIn(User))
```

ASP.NET CORE

MVC Web Application

MVCVoertuigDefault

Oefening

- Data class aanpassen
 - SeedData
- TagHelpers
 - CarInfo
 - HeperlinkButton
- ViewComponent
 - _layout.cshtml -> HeaderMenu
- VoertuigenController
 - Razor view Merk
 - Razor view Index