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### ****Step 1: Install Visual Studio 2022 (if not installed)****

* Download and install **Visual Studio 2022** from [Microsoft's website](https://visualstudio.microsoft.com/" \t "_new).
* During installation, select **ASP.NET and web development** workload.

### ****Step 2: Create a New ASP.NET Core MVC Project****

1. **Open Visual Studio 2022**.
2. Click on **"Create a new project"**.
3. Search for **"ASP.NET Core Web App (Model-View-Controller)"** and select it.
4. Click **Next**.
5. Give your project a **name** (e.g., OrganizationRegistration).
6. Choose a location for the project.
7. Click **Next**.
8. Choose:
   * **.NET 6.0 (LTS) or later**.
   * Keep **Authentication Type: None** (we will add later).
   * Click **Create**.

### ****Step 3: Create the Registration Form****

#### ****1. Create a Model (****Registration.cs****)****

* In **Solution Explorer**, right-click on the **Models** folder → Click **Add** → **Class**.
* Name it Registration.cs and add the following code:

using System.ComponentModel.DataAnnotations;

namespace OrganizationRegistration.Models

{

public class Registration

{

[Key]

public int Id { get; set; }

[Required(ErrorMessage = "Full Name is required")]

public string FullName { get; set; }

[Required(ErrorMessage = "Email is required")]

[EmailAddress]

public string Email { get; set; }

[Required(ErrorMessage = "Phone Number is required")]

public string PhoneNumber { get; set; }

[Required(ErrorMessage = "Department is required")]

public string Department { get; set; }

[Required(ErrorMessage = "Password is required")]

[DataType(DataType.Password)]

public string Password { get; set; }

[Compare("Password", ErrorMessage = "Passwords do not match")]

[DataType(DataType.Password)]

public string ConfirmPassword { get; set; }

}

}

#### ****2. Create a Database Context****

* In **Solution Explorer**, right-click on **Models** → **Add** → **Class**.
* Name it ApplicationDbContext.cs and add:

using Microsoft.EntityFrameworkCore;

namespace OrganizationRegistration.Models

{

public class ApplicationDbContext : DbContext

{

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

public DbSet<Registration> Registrations { get; set; }

}

}

### ****Step 4: Configure Database (SQL Server)****

1. Open **appsettings.json** and modify the connection string:

"ConnectionStrings": {

"DefaultConnection": "Server=(localdb)\\mssqllocaldb;Database=OrganizationDB;Trusted\_Connection=True;MultipleActiveResultSets=true"

}

1. Open **Program.cs** (or Startup.cs in older versions) and add:

using Microsoft.EntityFrameworkCore;

using OrganizationRegistration.Models;

var builder = WebApplication.CreateBuilder(args);

// Add services to the container.

builder.Services.AddControllersWithViews();

// Add Database Context

builder.Services.AddDbContext<ApplicationDbContext>(options =>

options.UseSqlServer(builder.Configuration.GetConnectionString("DefaultConnection")));

var app = builder.Build();

app.UseStaticFiles();

app.UseRouting();

app.UseAuthorization();

app.MapControllers();

app.Run();

### ****Step 5: Add Migrations & Update Database****

1. Open **Tools** → **NuGet Package Manager** → **Manage NuGet Packages for Solution**.
2. Install:
   1. Microsoft.EntityFrameworkCore.SqlServer
   2. Microsoft.EntityFrameworkCore.Tools
3. Open **Package Manager Console** (View > Other Windows > Package Manager Console).
4. Run the commands:

Add-Migration InitialCreate

Update-Database

### ****Step 6: Create the Controller****

1. In **Solution Explorer**, right-click on the **Controllers** folder → **Add** → **Controller**.
2. Select **MVC Controller with views, using Entity Framework**.
3. Choose the **Registration Model** and **ApplicationDbContext**.
4. Click **Add**.

This automatically creates a RegistrationController.cs file.

### ****Step 7: Modify Registration View****

1. Open **Views/Registration/Create.cshtml**.
2. Modify the form to include advanced controls:

@model OrganizationRegistration.Models.Registration

<h2>Registration Form</h2>

<form asp-action="Create">

<div class="form-group">

<label asp-for="FullName" class="control-label"></label>

<input asp-for="FullName" class="form-control" />

<span asp-validation-for="FullName" class="text-danger"></span>

</div>

<div class="form-group">

<label asp-for="Email" class="control-label"></label>

<input asp-for="Email" type="email" class="form-control" />

<span asp-validation-for="Email" class="text-danger"></span>

</div>

<div class="form-group">

<label asp-for="PhoneNumber" class="control-label"></label>

<input asp-for="PhoneNumber" type="tel" class="form-control" />

<span asp-validation-for="PhoneNumber" class="text-danger"></span>

</div>

<div class="form-group">

<label asp-for="Department" class="control-label"></label>

<select asp-for="Department" class="form-control">

<option value="">Select Department</option>

<option value="IT">IT</option>

<option value="HR">HR</option>

<option value="Finance">Finance</option>

</select>

<span asp-validation-for="Department" class="text-danger"></span>

</div>

<div class="form-group">

<label asp-for="Password" class="control-label"></label>

<input asp-for="Password" type="password" class="form-control" />

<span asp-validation-for="Password" class="text-danger"></span>

</div>

<div class="form-group">

<label asp-for="ConfirmPassword" class="control-label"></label>

<input asp-for="ConfirmPassword" type="password" class="form-control" />

<span asp-validation-for="ConfirmPassword" class="text-danger"></span>

</div>

<br>

<button type="submit" class="btn btn-primary">Register</button>

</form>

### ****Step 8: Enable Client-Side Validation****

1. Open **\_Layout.cshtml**.
2. Add the following inside <head>:

<script src="https://cdnjs.cloudflare.com/ajax/libs/jquery/3.6.0/jquery.min.js"></script>

<script src="https://cdnjs.cloudflare.com/ajax/libs/jquery-validate/1.19.3/jquery.validate.min.js"></script>

<script src="https://cdnjs.cloudflare.com/ajax/libs/jquery-validation-unobtrusive/3.2.11/jquery.validate.unobtrusive.min.js"></script>

### ****Step 9: Run the Application****

* Click **Start (IIS Express)**.
* Navigate to /Registration/Create to fill out the form.