GenericApp

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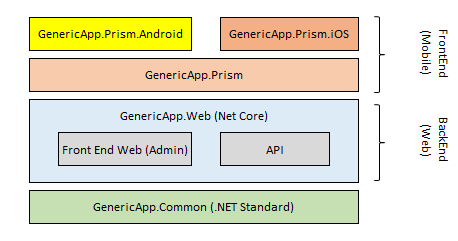
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# Matriz de funcionalidad

|  |  |  |  |
| --- | --- | --- | --- |
| **Funcionalidad** | **Web** | | **App** |
| **Admin** | **User** | **User** |
| Login | X | X | X |
| Registrarse como usuario |  | X | X |
| Modificar el perfil | X | X | X |
| Recordar contraseña | X | X | X |
| Administrar administradores | X |  |  |

# Arquitectura



# Repositorio en GitHub

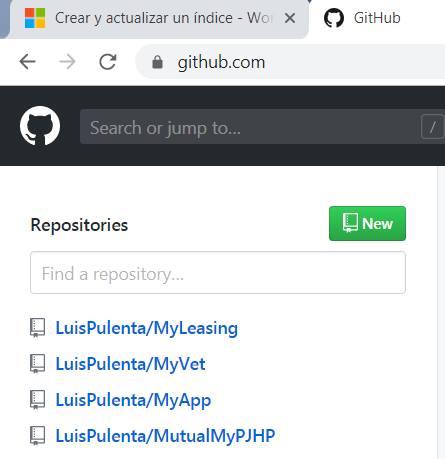
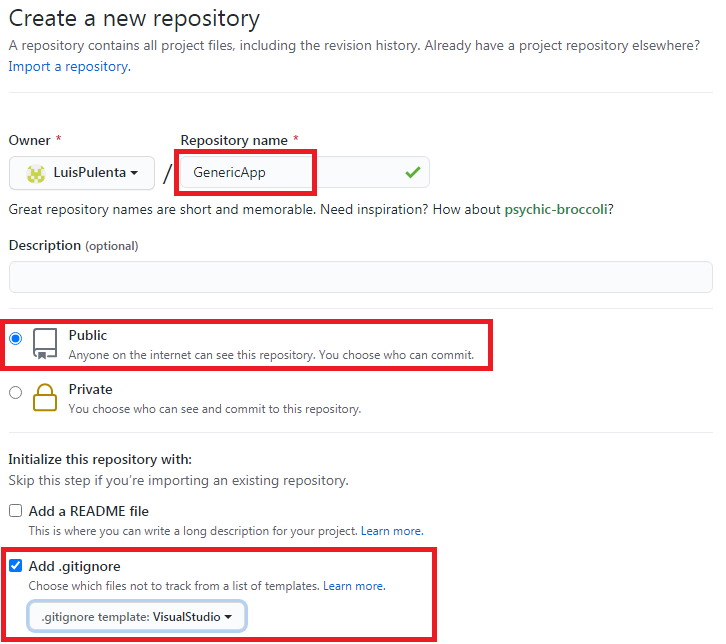
Empezamos haciendo el Repositorio en GitHub

Esta es la Web de GitHub, y mi usuario y contraseña:

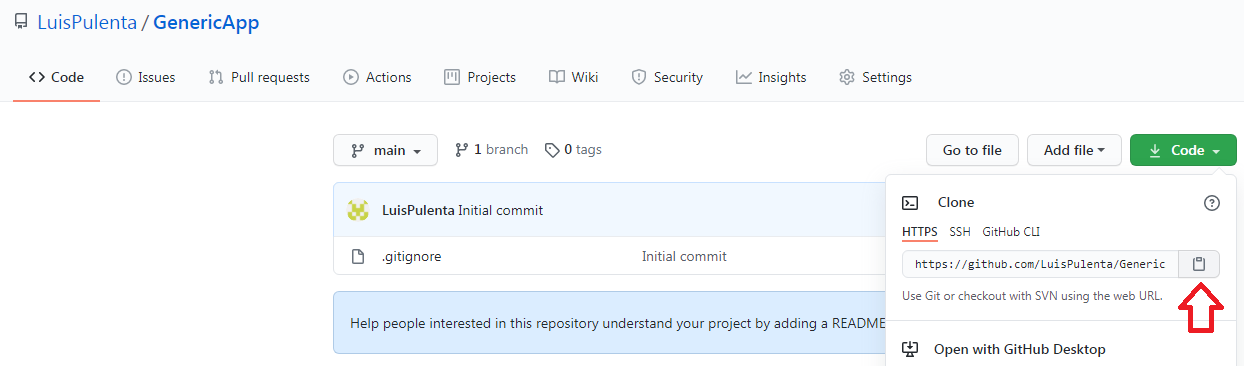
<https://github.com/> **Usuario:** LuisPulenta **Contraseña:** Talleres2306

Una vez dentro de GitHub vamos a “New” y ahí:

* Ponemos el Nombre
* Elegimos Public
* Agregamos un gitignore de tipo visualstudio

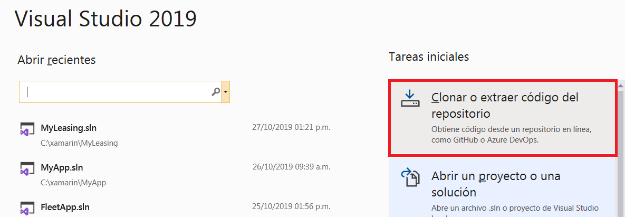
Luego copiamos la dirección para luego clonar en Visual Studio:



# Crear Solución y Proyectos Common, Web y Prism

## Solución en blanco

Abrimos Visual Studio y vamos a la opción Clonar

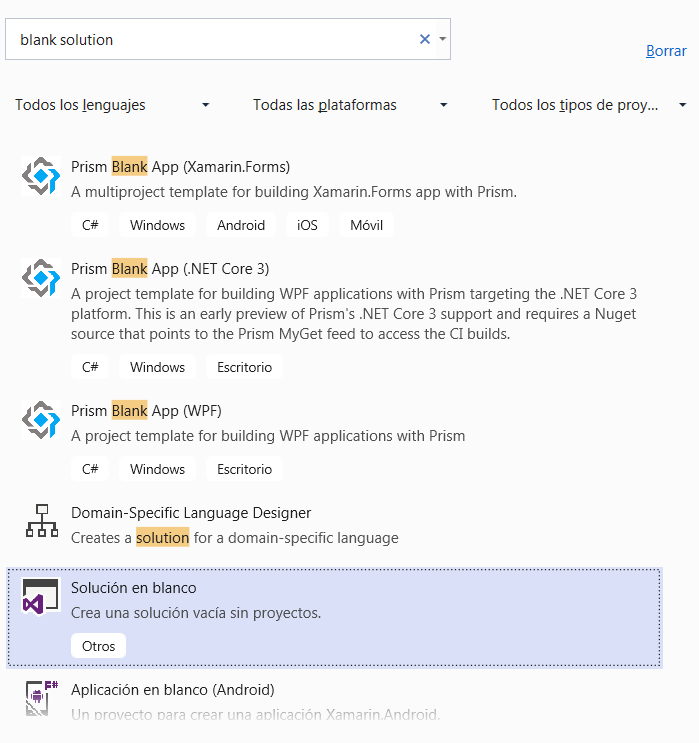
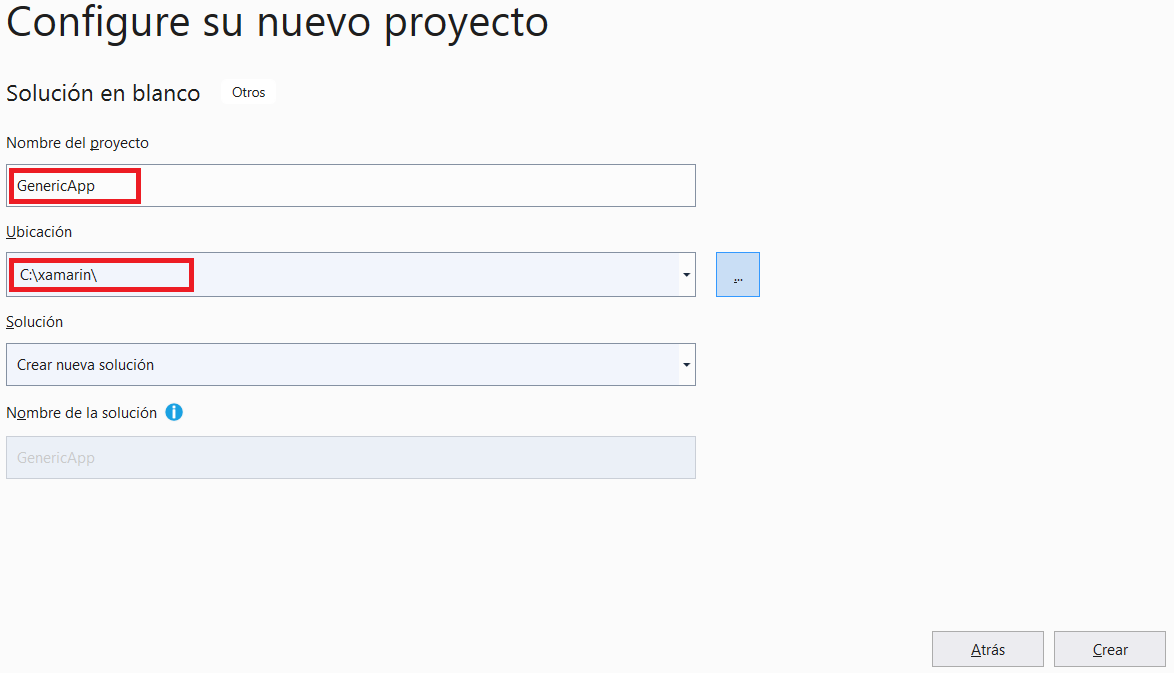




Que sea el mismo nombre del Repositorio. Debe ser una carpeta que no existe

Pegar

Luego hacemos **Archivo-Nuevo-Proyecto** y buscamos plantillas **blank solution** y elegimos Solución en blanco

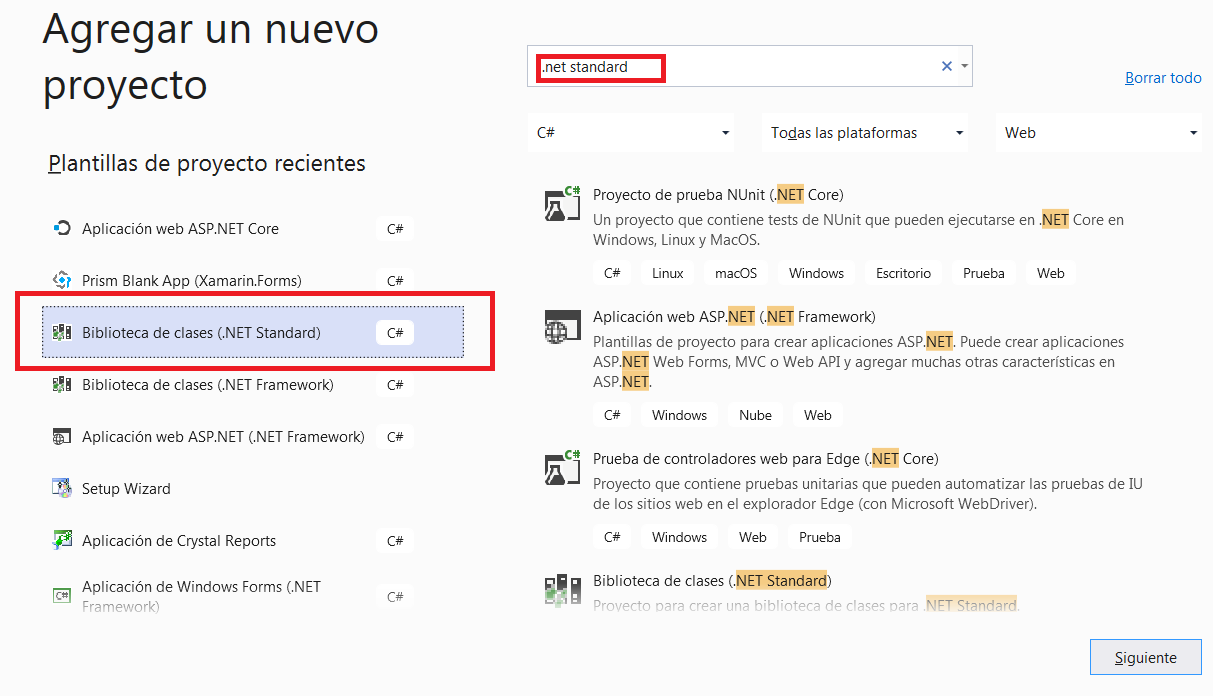
OJO!!! Debe ser la Carpeta CONTENEDORA

Que sea el mismo nombre del Repositorio

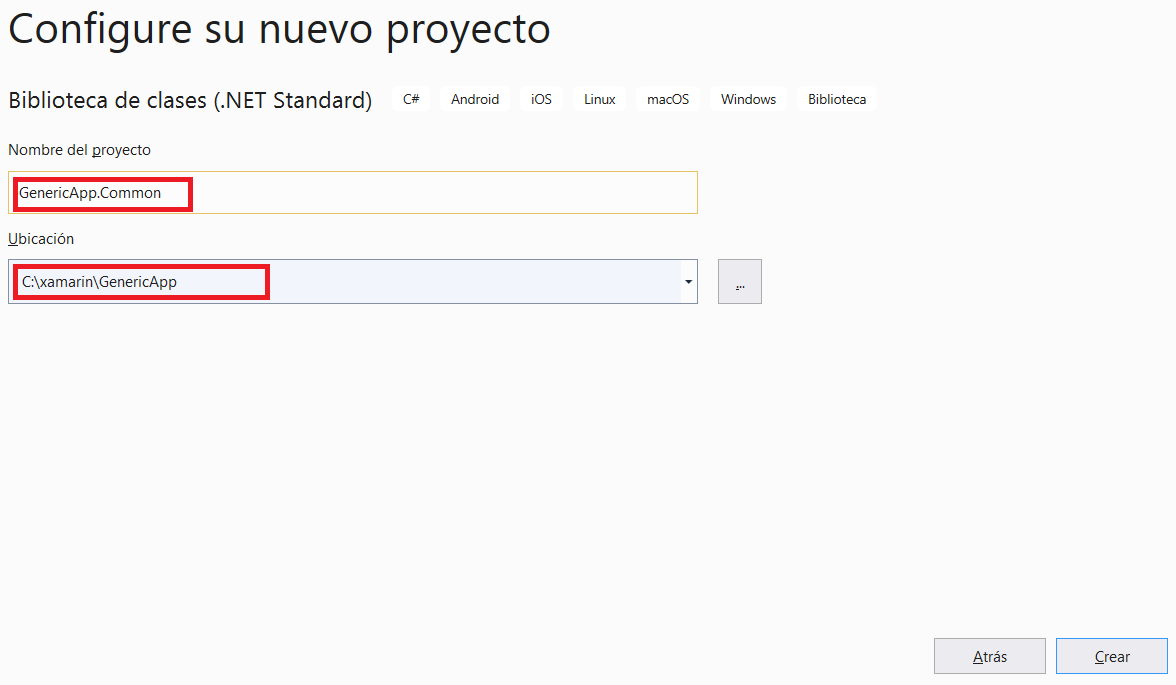
## Proyecto Common

Ahora hacemos clic derecho en la Solución y hacemos Agregar Nuevo Proyecto.

Ponemos **.net standard** en la plantilla y elegimos **Biblioteca de Clases c#**



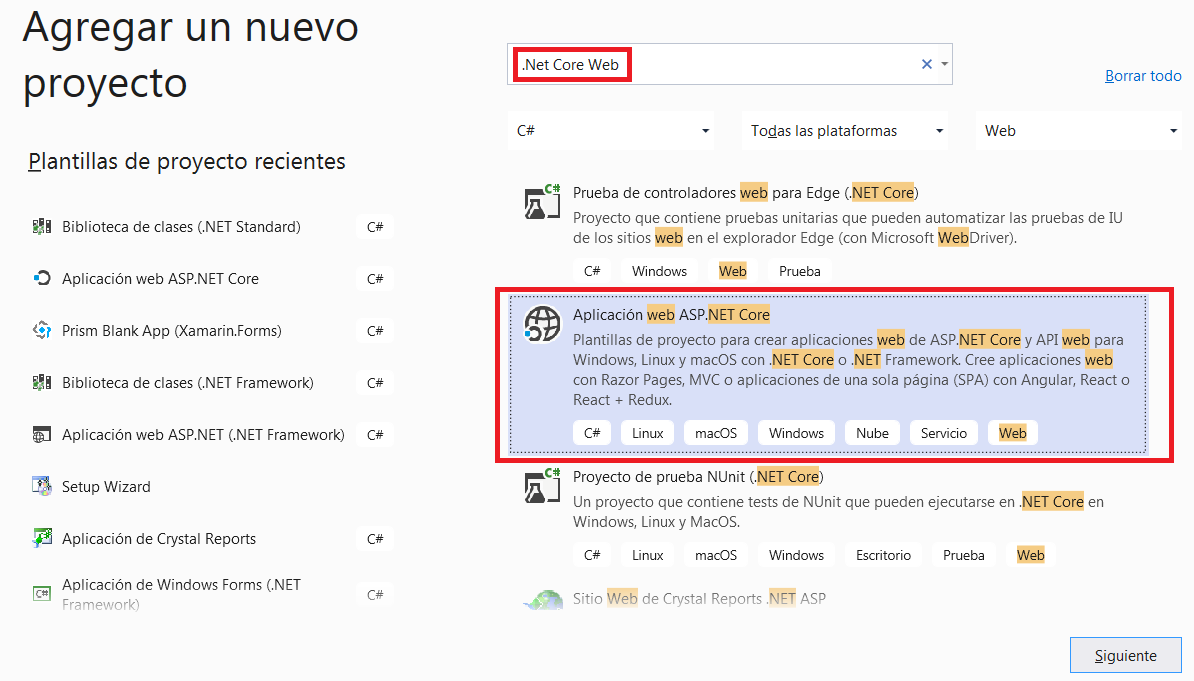
Y la llamamos **GenericApp.Common**

****

(La Clase Class1 que se crea la borramos)

## Proyecto Web (Net Core)

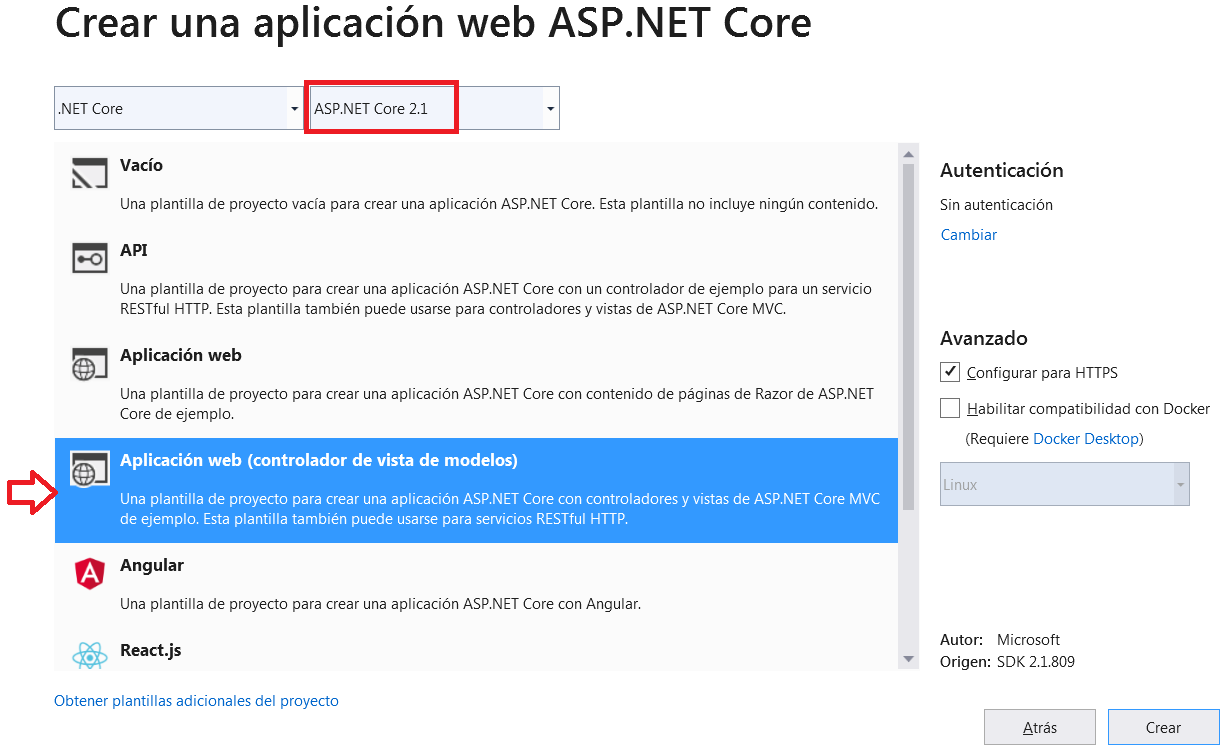
Volvemos a hacer clic derecho en la Solución y ahora ponemos **.Net Core Web** en la plantilla y elegimos **Aplicación Web.Net Core**



Como nombre le ponemos **GenericApp.Web**

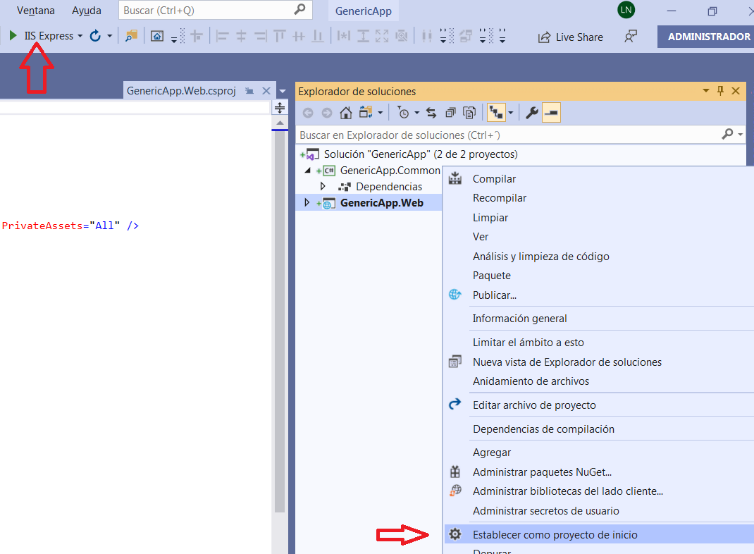
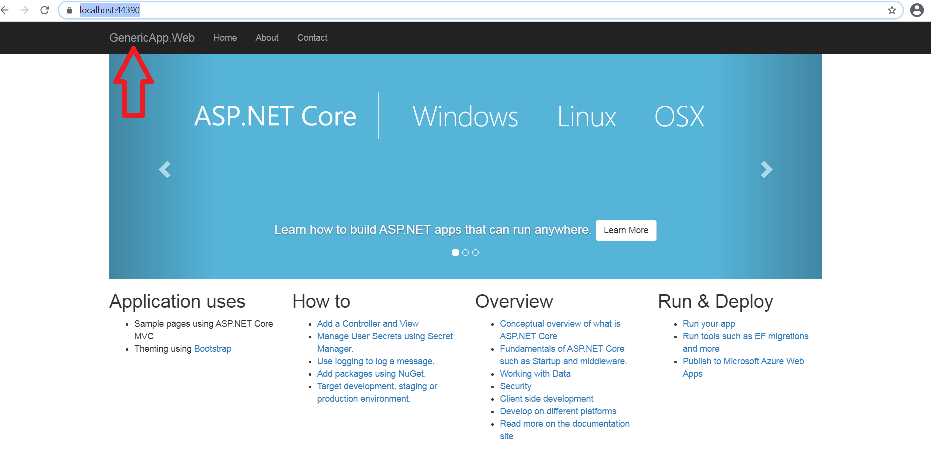


Debe ser Core 2.1 y elegimos la opción Aplicación web (controlador de vista de modelos)



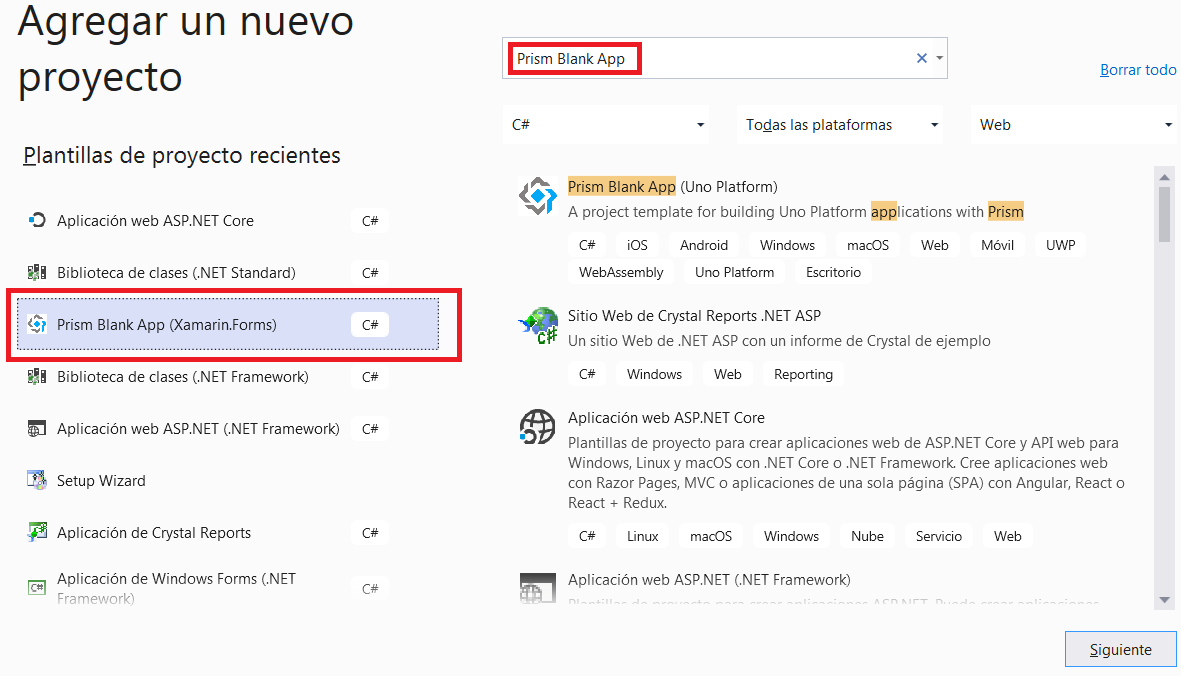
Este Proyecto ya debe arrrancar.

Hacemos clic derecho sobre el mismo y elegimos “Establecer como proyecto de inicio” y luego le damos Play:

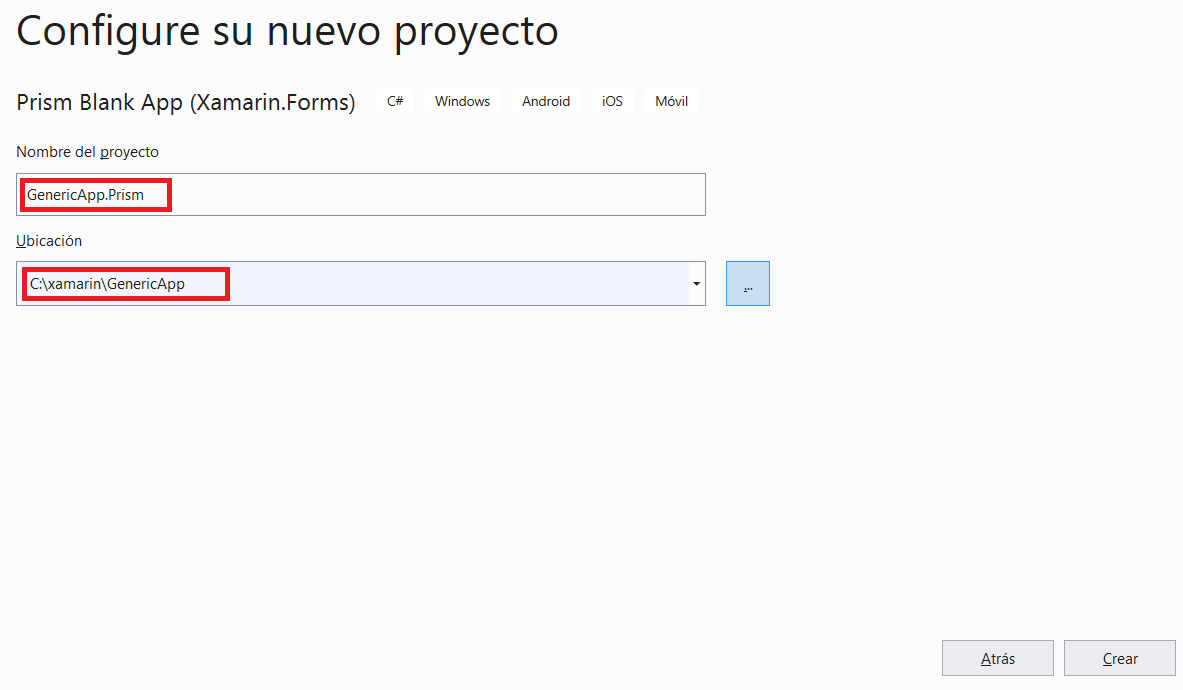
 

## Proyectos Prism

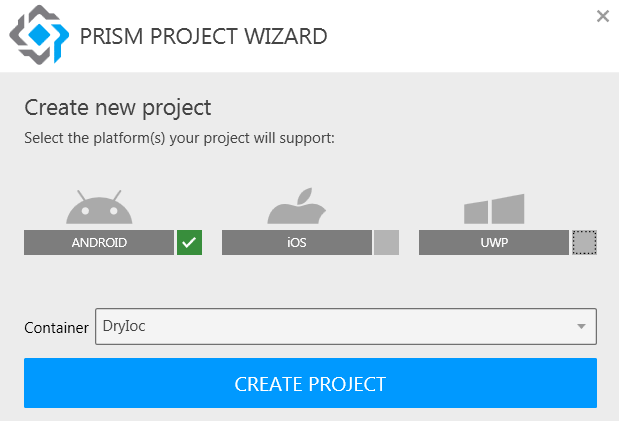
Volvemos a hacer clic derecho en la Solución y ahora ponemos **Prism Blank App** en la plantilla y elegimos **Prism Blank App (Xamarin.Forms)**

****

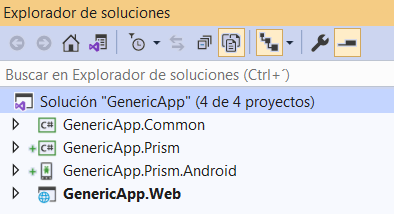
Como nombre le ponemos **GenericApp.Prism**



Elegimos **Container 🡪 DryIoc**



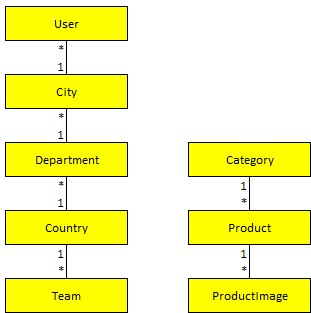
Una vez finalizado, así nos debe quedar la solución con todos sus Proyectos:



# Agregar Nuggets

|  |  |  |
| --- | --- | --- |
| **NUGGET** | **VERSION** | **AGREGAR A** |
| MailKit | 2.5.1 | Proyecto Web |
| Xamarin.FFImageLoading.Forms | 2.4.11.982 | Proyectos móviles |
| Syncfusion.Xamarin.Core | 17.3.0.9 beta | Proyectos móviles |
| Syncfusion.Xamarin.SfBusyIndicator | 17.3.0.9 beta | Proyectos móviles |
| Xam.Plugins.Settings | 4.1.0 beta | Proyecto Common |
| Xamarin.FFImageLoading.Transformations | 2.4.11.982 | Proyectos móviles |
| Xam.Plugin.Media | v.5.0.1 | Proyectos móviles |
| Plugin.Permissions | 6.0.1 | Proyecto Android |
| Plugin.CurrentActivity | 2.1.0.4 | Proyecto Android |
| Xamarin.Android.Support.v4 | 28.0.0.3 | Proyecto Android |
|  |  |  |
|  |  |  |

# Diagrama Entidad Relación



# Creación de la Base de Datos

## Entities

En el proyecto **Web** creamos la carpeta **Data**, dentro creamos la carpeta **Entities** y dentro de esta la clase **CountryEntity**:

|  |  |
| --- | --- |
| **CountryEntity** | **Comentarios** |
| using System.ComponentModel.DataAnnotations;  namespace GenericApp.Web.Data.Entities  {  public class CountryEntity  {  public int Id { get; set; }  [MaxLength(50, ErrorMessage = "El campo {0} debe contener menos de {1} caracteres")]  [Required(ErrorMessage = "El campo {0} es requerido")]  [Display(Name = "País")]  public string Name { get; set; }  [Display(Name = "Bandera")]  public string FlagImagePath { get; set; }  public string FlagImageFullPath => string.IsNullOrEmpty(FlagImagePath)  ? $"http://keypress.serveftp.net:88/GenericAppApi/images/Flags/noimage.png"  : $"http://keypress.serveftp.net:88/GenericAppApi{FlagImagePath.Substring(1)}";  }  } |  |

Dentro de **wwwroot/images** creamos la carpeta **Flags**

Dentro colocamos el archivo **noimage.png**

Creamos la Clase **CategoryEntity**

|  |  |
| --- | --- |
| **CategoryEntity** | **Comentarios** |
| using System.ComponentModel.DataAnnotations;  namespace GenericApp.Web.Data.Entities  {  public class CategoryEntity  {  public int Id { get; set; }  [MaxLength(50, ErrorMessage = "El campo {0} debe contener menos de {1} caracteres.")]  [Required(ErrorMessage = "El campo {0} es requerido")]  [Display(Name = "Categoría")]  public string Name { get; set; }  [Display(Name = "Imagen")]  public string ImagePath { get; set; }  [Display(Name = "Imagen")]  public string ImageFullPath => string.IsNullOrEmpty(ImagePath)  ? $"http://keypress.serveftp.net:88/GenericAppApi/images/Categories/noimage.png"  : $"http://keypress.serveftp.net:88/GenericAppApi{ImagePath.Substring(1)}";  }  } |  |

Dentro de **wwwroot/images** creamos la carpeta **Categories**

Dentro colocamos el archivo **noimage.png**

Creamos la Clase **ProductImageEntity**

|  |  |
| --- | --- |
| **ProductImageEntity** | **Comentarios** |
| using System.ComponentModel.DataAnnotations;  namespace GenericApp.Web.Data.Entities  {  public class ProductImageEntity  {  public int Id { get; set; }  [Display(Name = "Imagen")]  public string ImagePath { get; set; }  public string ImageFullPath => string.IsNullOrEmpty(ImagePath)  ? $"http://keypress.serveftp.net:88/GenericAppApi/images/Products/noimage.png"  : $"http://keypress.serveftp.net:88/GenericAppApi{ImagePath.Substring(1)}";  }  } |  |

Dentro de **wwwroot/images** creamos la carpeta **Products**

Dentro colocamos el archivo **noimage.png**

Creamos la Clase **ProductEntity**

|  |  |
| --- | --- |
| **ProductEntity** | **Comentarios** |
| using System.Collections.Generic;  using System.ComponentModel;  using System.ComponentModel.DataAnnotations;  using System.Linq;  namespace GenericApp.Web.Data.Entities  {  public class ProductEntity  {  public int Id { get; set; }  [MaxLength(50, ErrorMessage = "El campo {0} debe contener menos de {1} caracteres.")]  [Required(ErrorMessage = "El campo {0} es requerido")]  [Display(Name = "Producto")]  public string Name { get; set; }  [DataType(DataType.MultilineText)]  [Display(Name = "Descripción")]  public string Description { get; set; }  [DisplayFormat(DataFormatString = "{0:C2}")]  [Display(Name = "Precio")]  public decimal Price { get; set; }  [DisplayName("Activo")]  public bool IsActive { get; set; }  [DisplayName("Categoría")]  public CategoryEntity Category { get; set; }  public ICollection<ProductImageEntity> ProductImages { get; set; }  [DisplayName("N° Imágenes")]  public int ProductImagesNumber => ProductImages == null ? 0 : ProductImages.Count;  [Display(Name = "Imagen")]  public string ImageFullPath => ProductImages == null || ProductImages.Count == 0  ? $"http://keypress.serveftp.net:88/GenericAppApi/images/Products/noimage.png"  : ProductImages.FirstOrDefault().ImageFullPath;  }  } |  |

## DataContext

Dentro de la carpeta **Web/Data** creamos la clase **DataContext**:

|  |  |
| --- | --- |
| **DataContext** | **Comentarios** |
| using GenericApp.Web.Data.Entities;  using Microsoft.EntityFrameworkCore;  namespace GenericApp.Web.Data  {  public class DataContext : DbContext  {  public DataContext(DbContextOptions<DataContext> options) : base(options)  {  }  public DbSet<CategoryEntity> Categories { get; set; }  public DbSet<CityEntity> Cities { get; set; }  public DbSet<CountryEntity> Countries { get; set; }  public DbSet<DepartmentEntity> Departments { get; set; }  public DbSet<ProductEntity> Products { get; set; }  public DbSet<ProductImageEntity> ProductImages { get; set; }  public DbSet<TeamEntity> Teams { get; set; }  protected override void OnModelCreating(ModelBuilder modelBuilder)  {  base.OnModelCreating(modelBuilder);  modelBuilder.Entity<CategoryEntity>()  .HasIndex(t => t.Name)  .IsUnique();  modelBuilder.Entity<CountryEntity>()  .HasIndex(t => t.Name)  .IsUnique();  modelBuilder.Entity<DepartmentEntity>(dep =>  {  dep.HasIndex("Name", "CountryId").IsUnique();  dep.HasOne(d => d.Country).WithMany(c => c.Departments).OnDelete(DeleteBehavior.Cascade);  });  modelBuilder.Entity<ProductEntity>()  .HasIndex(t => t.Name)  .IsUnique();  modelBuilder.Entity<CityEntity>(cit =>  {  cit.HasIndex("Name", "DepartmentId").IsUnique();  cit.HasOne(c => c.Department).WithMany(d => d.Cities).OnDelete(DeleteBehavior.Cascade);  });  modelBuilder.Entity<TeamEntity>(dep =>  {  dep.HasIndex("Name", "CountryId").IsUnique();  dep.HasOne(d => d.Country).WithMany(c => c.Teams).OnDelete(DeleteBehavior.Cascade);  });  }  }  } | Esto es un índice para que no se puedan repetirlos nombres de países |

## Cadena de conexión

Agregue una cadena de conexión al archivo **appsettings.json**:

|  |  |
| --- | --- |
| **appsettings.json** | **Comentarios** |
| {  "Logging": {  "LogLevel": {  "Default": "Warning"  }  },  "AllowedHosts": "\*",  "ConnectionStrings": { "DefaultConnection": "Server=keypress.serveftp.net;Database=LuisGenericApp;User Id=sa;password=sentey14$;Trusted\_Connection=False;MultipleActiveResultSets=true" },  "Tokens": {  "Key": "askñlakds8980234kjklfdosfuioJLJllksfjlk890()=jKLjouUOoiuKLiuioYDtDT#$fCjÑkKÑLkñjlkjlkJLkjlkj78G",  "Issuer": "localhost",  "Audience": "users"  },  "Mail": {  "From": "luissolflix@gmail.com",  "Smtp": "smtp.gmail.com",  "Port": 587,  "Password": "Solflix2306"  }  } | Acá va el nombre de la Base de Datos  Esto es para los Tokens  Esto es para el envío de mails |

Inyectamos la conexión a la base de datos en el archivo **Startup** en el método **ConfigureServices**:

|  |  |
| --- | --- |
| **Startup** | **Comentarios** |
| public void ConfigureServices(IServiceCollection services)  {  services.Configure<CookiePolicyOptions>(options =>  {  options.CheckConsentNeeded = context => true;  options.MinimumSameSitePolicy = SameSiteMode.None;  });  services.AddDbContext<DataContext>(cfg =>  {  cfg.UseSqlServer(Configuration.GetConnectionString("DefaultConnection"));  });  services.AddMvc().SetCompatibilityVersion(CompatibilityVersion.Version\_2\_1);  } |  |

En la Consola del Administrador de Paquetes, corremos los comandos para crear la base de datos de forma local:

PM> add-migration InitialDb

PM> update-database

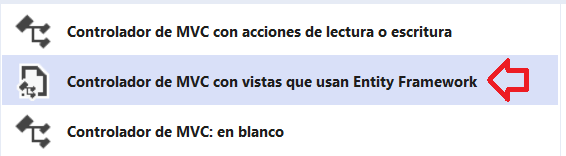
Verificamos en el SQL Server que la Base de Datos se haya creado.

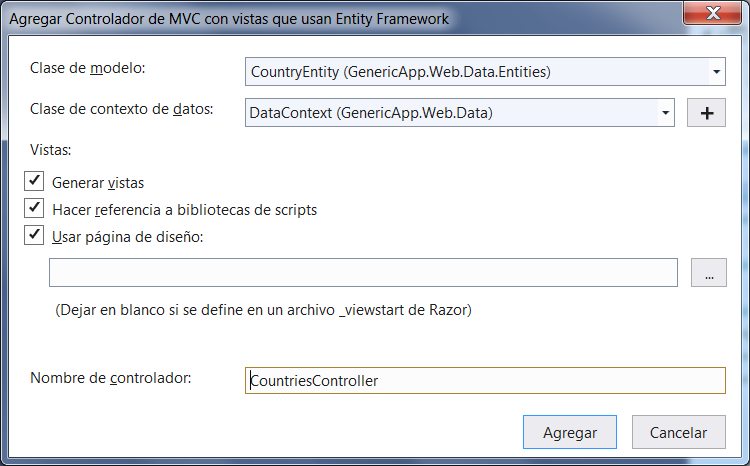
# CRUD para Countries

## Controlador

Creamos un controlador con el asistente para countries.

Clic derecho en Controllers, Agregar, Controlador, y elegimos Controlador de MVC con vistas que usan Entity Framework





Ponemos el nombre

Elegimos DataContext

Elegimos la Entity

|  |  |
| --- | --- |
| **CountriesController** | **Comentarios** |
| using System;  using System.Linq;  using System.Threading.Tasks;  using Microsoft.AspNetCore.Authorization;  using Microsoft.AspNetCore.Mvc;  using Microsoft.EntityFrameworkCore;  using OnSale.Common.Entities;  using OnSale.Web.Data;  namespace OnSale.Web.Controllers  {  [Authorize(Roles = "Admin")]  public class CountriesController : Controller  {  private readonly DataContext \_context;  public CountriesController(DataContext context)  {  \_context = context;  }  // GET: Countries  public async Task<IActionResult> Index()  {  return View(await \_context.Countries  .Include(c => c.Departments)  .ToListAsync());  }  // GET: Countries/Details/5  public async Task<IActionResult> Details(int? id)  {  if (id == null)  {  return NotFound();  }  var country = await \_context.Countries  .Include(c => c.Departments)  .ThenInclude(d=>d.Cities)  .FirstOrDefaultAsync(m => m.Id == id);  if (country == null)  {  return NotFound();  }  return View(country);  }  // GET: Countries/Create  public IActionResult Create()  {  return View(new Country());  }  // POST: Countries/Create  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> Create(Country country)  {  if (ModelState.IsValid)  {  try  {  \_context.Add(country);  await \_context.SaveChangesAsync();  return RedirectToAction(nameof(Index));  }  catch (DbUpdateException dbUpdateException)  {  if (dbUpdateException.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "There are a record with the same name.");  }  else  {  ModelState.AddModelError(string.Empty, dbUpdateException.InnerException.Message);  }  }  catch (Exception exception)  {  ModelState.AddModelError(string.Empty, exception.Message);  }  }  return View(country);  }  // GET: Countries/Edit/5  public async Task<IActionResult> Edit(int? id)  {  if (id == null)  {  return NotFound();  }  var country = await \_context.Countries.FindAsync(id);  if (country == null)  {  return NotFound();  }  return View(country);  }  // POST: Countries/Edit/5  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> Edit(int id, Country country)  {  if (id != country.Id)  {  return NotFound();  }  if (ModelState.IsValid)  {  try  {  \_context.Update(country);  await \_context.SaveChangesAsync();  return RedirectToAction(nameof(Index));  }  catch (DbUpdateException dbUpdateException)  {  if (dbUpdateException.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "There are a record with the same name.");  }  else  {  ModelState.AddModelError(string.Empty, dbUpdateException.InnerException.Message);  }  }  catch (Exception exception)  {  ModelState.AddModelError(string.Empty, exception.Message);  }  }  return View(country);  }  // GET: Countries/Delete/5  public async Task<IActionResult> Delete(int? id)  {  if (id == null)  {  return NotFound();  }  Country country = await \_context.Countries  .Include(c => c.Departments)  .ThenInclude(d => d.Cities)  .FirstOrDefaultAsync(m => m.Id == id);  if (country == null)  {  return NotFound();  }  \_context.Countries.Remove(country);  await \_context.SaveChangesAsync();  return RedirectToAction(nameof(Index));  }  private bool CountryExists(int id)  {  return \_context.Countries.Any(e => e.Id == id);  }  public async Task<IActionResult> AddDepartment(int? id)  {  if (id == null)  {  return NotFound();  }  Country country = await \_context.Countries.FindAsync(id);  if (country == null)  {  return NotFound();  }  Department model = new Department { IdCountry = country.Id };  return View(model);  }  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> AddDepartment(Department department)  {  if (ModelState.IsValid)  {  Country country = await \_context.Countries  .Include(c => c.Departments)  .FirstOrDefaultAsync(c => c.Id == department.IdCountry);  if (country == null)  {  return NotFound();  }  try  {  department.Id = 0;  country.Departments.Add(department);  \_context.Update(country);  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(Details)}/{country.Id}");  }  catch (DbUpdateException dbUpdateException)  {  if (dbUpdateException.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "There are a record with the same name.");  }  else  {  ModelState.AddModelError(string.Empty, dbUpdateException.InnerException.Message);  }  }  catch (Exception exception)  {  ModelState.AddModelError(string.Empty, exception.Message);  }  }  return View(department);  }  public async Task<IActionResult> EditDepartment(int? id)  {  if (id == null)  {  return NotFound();  }  Department department = await \_context.Departments.FindAsync(id);  if (department == null)  {  return NotFound();  }  Country country = await \_context.Countries.FirstOrDefaultAsync(c => c.Departments.FirstOrDefault(d => d.Id == department.Id) != null);  department.IdCountry = country.Id;  return View(department);  }  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> EditDepartment(Department department)  {  if (ModelState.IsValid)  {  try  {  \_context.Update(department);  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(Details)}/{department.IdCountry}");  }  catch (DbUpdateException dbUpdateException)  {  if (dbUpdateException.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "There are a record with the same name.");  }  else  {  ModelState.AddModelError(string.Empty, dbUpdateException.InnerException.Message);  }  }  catch (Exception exception)  {  ModelState.AddModelError(string.Empty, exception.Message);  }  }  return View(department);  }  public async Task<IActionResult> DeleteDepartment(int? id)  {  if (id == null)  {  return NotFound();  }  Department department = await \_context.Departments  .Include(d => d.Cities)  .FirstOrDefaultAsync(m => m.Id == id);  if (department == null)  {  return NotFound();  }  Country country = await \_context.Countries.FirstOrDefaultAsync(c => c.Departments.FirstOrDefault(d => d.Id == department.Id) != null);  \_context.Departments.Remove(department);  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(Details)}/{country.Id}");  }  public async Task<IActionResult> DetailsDepartment(int? id)  {  if (id == null)  {  return NotFound();  }  Department department = await \_context.Departments  .Include(d => d.Cities)  .FirstOrDefaultAsync(m => m.Id == id);  if (department == null)  {  return NotFound();  }  Country country = await \_context.Countries.FirstOrDefaultAsync(c => c.Departments.FirstOrDefault(d => d.Id == department.Id) != null);  department.IdCountry = country.Id;  return View(department);  }  public async Task<IActionResult> AddCity(int? id)  {  if (id == null)  {  return NotFound();  }  Department department = await \_context.Departments.FindAsync(id);  if (department == null)  {  return NotFound();  }  City model = new City { IdDepartment = department.Id };  return View(model);  }  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> AddCity(City city)  {  if (ModelState.IsValid)  {  Department department = await \_context.Departments  .Include(d => d.Cities)  .FirstOrDefaultAsync(c => c.Id == city.IdDepartment);  if (department == null)  {  return NotFound();  }  try  {  city.Id = 0;  department.Cities.Add(city);  \_context.Update(department);  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(DetailsDepartment)}/{department.Id}");  }  catch (DbUpdateException dbUpdateException)  {  if (dbUpdateException.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "There are a record with the same name.");  }  else  {  ModelState.AddModelError(string.Empty, dbUpdateException.InnerException.Message);  }  }  catch (Exception exception)  {  ModelState.AddModelError(string.Empty, exception.Message);  }  }  return View(city);  }  public async Task<IActionResult> EditCity(int? id)  {  if (id == null)  {  return NotFound();  }  City city = await \_context.Cities.FindAsync(id);  if (city == null)  {  return NotFound();  }  Department department = await \_context.Departments.FirstOrDefaultAsync(d => d.Cities.FirstOrDefault(c => c.Id == city.Id) != null);  city.IdDepartment = department.Id;  return View(city);  }  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> EditCity(City city)  {  if (ModelState.IsValid)  {  try  {  \_context.Update(city);  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(DetailsDepartment)}/{city.IdDepartment}");  }  catch (DbUpdateException dbUpdateException)  {  if (dbUpdateException.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "There are a record with the same name.");  }  else  {  ModelState.AddModelError(string.Empty, dbUpdateException.InnerException.Message);  }  }  catch (Exception exception)  {  ModelState.AddModelError(string.Empty, exception.Message);  }  }  return View(city);  }  public async Task<IActionResult> DeleteCity(int? id)  {  if (id == null)  {  return NotFound();  }  City city = await \_context.Cities  .FirstOrDefaultAsync(m => m.Id == id);  if (city == null)  {  return NotFound();  }  Department department = await \_context.Departments.FirstOrDefaultAsync(d => d.Cities.FirstOrDefault(c => c.Id == city.Id) != null);  \_context.Cities.Remove(city);  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(DetailsDepartment)}/{department.Id}");  }  }  } | LISTA DE PAISES  CREA UN PAIS (GET)  CREA UN PAIS (POST)  EDITA UN PAIS (GET)  EDITA UN PAIS (POST)  BORRA UN PAIS (GET)  BORRA UN PAIS (POST) |

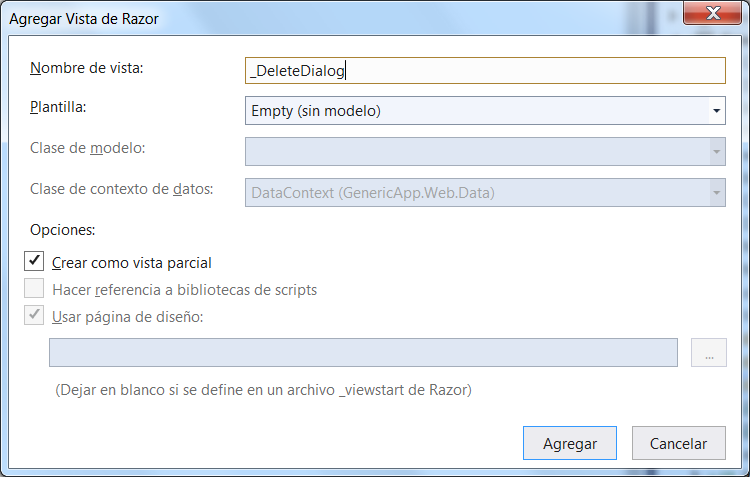
Modificamos el menú para poder probar lo que llevamos.

En el Proyecto **Web**, en **Views/Shared/\_Layout.cshtml** agregamos:

|  |  |
| --- | --- |
| **\_Layout.cshtml** | **Comentarios** |
| <div class="navbar-collapse collapse">  <ul class="nav navbar-nav">  <li><a **asp-area**="" **asp-controller**="Home" **asp-action**="Index">Home</a></li>  <li><a **asp-area**="" **asp-controller**="Home" **asp-action**="About">About</a></li>  <li><a **asp-area**="" **asp-controller**="Home" **asp-action**="Contact">Contact</a></li>  <li><a **asp-area**="" **asp-controller**="Countries" **asp-action**="Index">Países</a></li>  </ul>  </div> |  |

## Mejorar CRUD Countries

En **Views/Shared** hacemos clic derecho, Agregar, Vista, Vista de Razor, y la llamamos **\_DeleteDialog**:



Tildamos aquí

Ponemos el nombre

|  |  |
| --- | --- |
| **\_DeleteDialog** | **Comentarios** |
| <div class="modal fade" id="deleteDialog" tabindex="-1" role="dialog" aria-labelledby="exampleModalLabel" aria-hidden="true">  <div class="modal-dialog" role="document">  <div class="modal-content">  <div class="modal-header">  <h5 class="modal-title" id="exampleModalLabel">Borrar Registro</h5>  </div>  <div class="modal-body">  <p>Está seguro de borrar este registro?</p>  </div>  <div class="modal-footer">  <button type="button" class="btn btn-primary" data-dismiss="modal">No</button>  <button type="button" class="btn btn-danger" id="btnYesDelete">Si</button>  </div>  </div>  </div>  </div> |  |

En **wwwroot/js** hacemos clicl derecho, agregar, Nuevo elemento, Archivo JavaScript, y lo llamamos **deleteDialog.js**

|  |  |
| --- | --- |
| **deleteDialog.js** | **Comentarios** |
| (function (soccerDeleteDialog) {  var methods = {  "openModal": openModal,  "deleteItem": deleteItem  };  var item\_to\_delete;  /\*\*  \* Open a modal by class name or Id.  \*  \* @return string id item.  \*/  function openModal(modalName, classOrId, sourceEvent, deletePath, eventClassOrId) {  var textEvent;  if (classOrId) {  textEvent = "." + modalName;  } else {  textEvent = "#" + modalName;  }  $(textEvent).click((e) => {  item\_to\_delete = e.currentTarget.dataset.id;  deleteItem(sourceEvent, deletePath, eventClassOrId);  });  }  /\*\*  \* Path to delete an item.  \*  \* @return void.  \*/  function deleteItem(sourceEvent, deletePath, eventClassOrId) {  var textEvent;  if (eventClassOrId) {  textEvent = "." + sourceEvent;  } else {  textEvent = "#" + sourceEvent;  }  $(textEvent).click(function () {  window.location.href = deletePath + item\_to\_delete;  });  }  soccerDeleteDialog.sc\_deleteDialog = methods;  })(window); |  |

En el Controlador CountriesController, modificamos la acción **Delete.**

Borramos las acciones Delete Get y Delete Post y ponemos:

|  |  |
| --- | --- |
| **CountriesController** | **Comentarios** |
| // POST: Countries/Delete/5  public async Task<IActionResult> Delete(int? id)  {  if (id == null)  {  return NotFound();  }  CountryEntity country = await \_context.Countries  .FirstOrDefaultAsync(m => m.Id == id);  if (country == null)  {  return NotFound();  }  \_context.Countries.Remove(country);  await \_context.SaveChangesAsync();  return RedirectToAction(nameof(Index));  } |  |

Modificamos el resto de vistas colocando los botones con estilos.

Vista **Index**:

|  |  |
| --- | --- |
| **Index** | **Comentarios** |
| @model IEnumerable<GenericApp.Web.Data.Entities.CountryEntity>  @{  ViewData["Title"] = "Index";  }  <h2>  <img src="/images/Flags/countries.png" alt="Image" style="width:70;height:70px;max-height: 100%; width: auto;" />  Países  </h2>  <link rel="stylesheet" href="https://cdn.datatables.net/1.10.19/css/jquery.dataTables.min.css" />  <br />  <p>  <a **asp-action**="Create" class="btn btn-primary"><i class="glyphicon glyphicon-plus"></i> Agregar nuevo país</a>  </p>  <div class="row">  <div class="col-md-12">  <div class="panel panel-default">  <div class="panel-heading">  <h3 class="panel-title">Países</h3>  </div>  <div class="panel-body">  <table class="table table-hover table-responsive table-striped" id="MyTable">  <thead>  <tr>  <th>  @Html.DisplayNameFor(model => model.Name)  </th>  <th>  @Html.DisplayNameFor(model => model.FlagImagePath)  </th>  <th>  @Html.DisplayNameFor(model => model.DepartmentsNumber)  </th>  <th>  @Html.DisplayNameFor(model => model.TeamsNumber)  </th>  <th></th>  </tr>  </thead>  <tbody>  @foreach (var item in Model)  {  <tr>  <td>  @Html.DisplayFor(modelItem => item.Name)  </td>  <td>  @if (!string.IsNullOrEmpty(item.FlagImagePath))  {  <img src="@Url.Content(item.FlagImagePath)" alt="Image" style="width:50px;height:50px;max-width: 100%; height: auto;" />  }  else  {  <img src="@Url.Content(item.FlagImagePath)" alt="Image" style="width:50px;height:50px;max-width: 100%; height: auto;" />  }  </td>  <td>  @Html.DisplayFor(modelItem => item.DepartmentsNumber)  </td>  <td>  @Html.DisplayFor(modelItem => item.TeamsNumber)  </td>  <td>  <a **asp-action**="Edit" **asp-route-id**="@item.Id" class="btn btn-warning"><i class="glyphicon glyphicon-pencil"></i></a>  <a **asp-action**="Details" **asp-route-id**="@item.Id" class="btn btn-info"><i class="glyphicon glyphicon-align-justify"></i></a>  <button data-id="@item.Id" class="btn btn-danger deleteItem" data-toggle="modal" data-target="#deleteDialog"><i class="glyphicon glyphicon-trash"></i></button>  </td>  </tr>  }  </tbody>  </table>  </div>  </div>  </div>  </div>  <**partial** **name**="\_DeleteDialog" />  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  <script src="//cdn.datatables.net/1.10.19/js/jquery.dataTables.min.js"></script>  <script src="/js/deleteDialog.js"></script>  <script type="text/javascript">  $(document).ready(function () {  $('#MyTable').DataTable();  // Delete item  sc\_deleteDialog.openModal('deleteItem', true, 'btnYesDelete', '/Countries/Delete/', false);  });  </script>  } |  |

Adicionamos una validación al controlador para evitar errores de duplicados.

En el Controlador **CountriesController**, en la acción **Create Post**, hacemos:

|  |  |
| --- | --- |
| **CountriesController** | **Comentarios** |
| // POST: Countries/Create  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> Create(CountryEntity country)  {  if (ModelState.IsValid)  {  try  {  \_context.Add(country);  await \_context.SaveChangesAsync();  return RedirectToAction(nameof(Index));  }  catch (DbUpdateException dbUpdateException)  {  if (dbUpdateException.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "Hay un registro con el mismo nombre.");  }  else  {  ModelState.AddModelError(string.Empty, dbUpdateException.InnerException.Message);  }  }  catch (Exception exception)  {  ModelState.AddModelError(string.Empty, exception.Message);  }  }  return View(country);  } |  |

Hacemos algo similar en la acción **Edit Post**:

|  |  |
| --- | --- |
| **CountriesController** | **Comentarios** |
| // POST: Countries/Edit/5  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> Edit(int id, CountryEntity country)  {  if (id != country.Id)  {  return NotFound();  }  if (ModelState.IsValid)  {  try  {  \_context.Update(country);  await \_context.SaveChangesAsync();  return RedirectToAction(nameof(Index));  }  catch (DbUpdateException dbUpdateException)  {  if (dbUpdateException.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "Hay un registro con el mismo nombre.");  }  else  {  ModelState.AddModelError(string.Empty, dbUpdateException.InnerException.Message);  }  }  catch (Exception exception)  {  ModelState.AddModelError(string.Empty, exception.Message);  }  }  return View(country);  } |  |

Creamos la Vista Parcial **\_Country**

|  |  |
| --- | --- |
| **\_Country** | **Comentarios** |
| @model GenericApp.Web.Data.Entities.CountryEntity  <div class="form-group">  <label **asp-for**="Name" class="control-label"></label>  <input **asp-for**="Name" class="form-control" />  <span **asp-validation-for**="Name" class="text-danger"></span>  </div> |  |

Modificamos la **Vista Create**:

|  |  |
| --- | --- |
| **Create** | **Comentarios** |
| @model GenericApp.Web.Models.CountryViewModel  @{  ViewData["Title"] = "Create";  }  <h2>  <img src="/images/Flags/addcountry.png" alt="Image" style="width:70;height:70px;max-height: 100%; width: auto;" />  Agregar nuevo País  </h2>  <h4></h4>  <hr />  <div class="row">  <div class="col-md-4">  <form **asp-action**="Create" enctype="multipart/form-data">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <**partial** **name**="\_Country" />  <div class="form-group">  <input type="submit" value="Crear" class="btn btn-primary" />  <a **asp-action**="Index" class="btn btn-success">Regresar</a>  </div>  </form>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  } |  |

Modificamos la **Vista Edit**:

|  |  |
| --- | --- |
| **Edit** | **Comentarios** |
| @model GenericApp.Web.Data.Entities.CountryEntity  @{  ViewData["Title"] = "Edit";  }  <h2>Editar País</h2>  <h4></h4>  <hr />  <div class="row">  <div class="col-md-4">  <form **asp-action**="Edit">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <input **type**="hidden" **asp-for**="Id" />  <**partial** **name**="\_Country" />  <div class="form-group">  <input type="submit" value="Grabar" class="btn btn-primary" />  <a **asp-action**="Index" class="btn btn-success">Regresar</a>  </div>  </form>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  } |  |

Eliminamos la **Vista Delete**

# Entities Department, City y Team

## DepartmentEntity

Creamos en **Web/Data/Entities** la Clase **DepartmentEntity**

|  |  |
| --- | --- |
| **DepartmentEntity** | **Comentarios** |
| using Newtonsoft.Json;  using System.Collections.Generic;  using System.ComponentModel;  using System.ComponentModel.DataAnnotations;  using System.ComponentModel.DataAnnotations.Schema;  namespace GenericApp.Web.Data.Entities  {  public class DepartmentEntity  {  public int Id { get; set; }  [MaxLength(50, ErrorMessage = "El campo {0} debe contener menos de {1} caracteres.")]  [Required(ErrorMessage = "El campo {0} es requerido")]  [Display(Name = "Provincia")]  public string Name { get; set; }  public ICollection<CityEntity> Cities { get; set; }  [DisplayName("N° Ciudades")]  public int CitiesNumber => Cities == null ? 0 : Cities.Count;  [JsonIgnore]  [NotMapped]  public int IdCountry { get; set; }  [JsonIgnore]  public CountryEntity Country { get; set; }  }  } |  |

## CityEntity

Creamos en **Web/Data/Entities** la Clase **CityEntity**

|  |  |
| --- | --- |
| **CityEntity** | **Comentarios** |
| using Newtonsoft.Json;  using System.ComponentModel.DataAnnotations;  using System.ComponentModel.DataAnnotations.Schema;  namespace GenericApp.Web.Data.Entities  {  public class CityEntity  {  public int Id { get; set; }  [MaxLength(50, ErrorMessage = "El campo {0} debe contener menos de {1} caracteres.")]  [Required(ErrorMessage = "El campo {0} es requerido")]  [Display(Name = "Ciudad")]  public string Name { get; set; }  [JsonIgnore]  [NotMapped]  public int IdDepartment { get; set; }  [JsonIgnore]  public DepartmentEntity Department { get; set; }  }  } |  |

## CountryEntity

Agregamos a **CountryEntity**

|  |  |
| --- | --- |
| **CountryEntity** | **Comentarios** |
| using System.Collections.Generic;  using System.ComponentModel;  using System.ComponentModel.DataAnnotations;  namespace GenericApp.Web.Data.Entities  {  public class CountryEntity  {  public int Id { get; set; }  [MaxLength(50, ErrorMessage = "El campo {0} debe contener menos de {1} caracteres")]  [Required(ErrorMessage = "El campo {0} es requerido")]  [Display(Name = "País")]  public string Name { get; set; }  [Display(Name = "Bandera")]  public string FlagImagePath { get; set; }  public ICollection<DepartmentEntity> Departments { get; set; }  public ICollection<TeamEntity> Teams { get; set; }  [DisplayName("N° Provincias")]  public int DepartmentsNumber => Departments == null ? 0 : Departments.Count;  [DisplayName("N° Equipos")]  public int TeamsNumber => Teams == null ? 0 : Teams.Count;  public string FlagImageFullPath => string.IsNullOrEmpty(FlagImagePath)  ? $"http://keypress.serveftp.net:88/GenericAppApi/images/Flags/noimage.png"  : $"http://keypress.serveftp.net:88/GenericAppApi{FlagImagePath.Substring(1)}";  }  } |  |

## TeamEntity

Creamos en **Web/Data/Entities** la Clase **TeamEntity**

|  |  |
| --- | --- |
| **TeamEntity** | **Comentarios** |
| using Newtonsoft.Json;  using System.ComponentModel.DataAnnotations;  using System.ComponentModel.DataAnnotations.Schema;  namespace GenericApp.Web.Data.Entities  {  public class TeamEntity  {  public int Id { get; set; }  [MaxLength(50, ErrorMessage = "El campo {0} debe contener menos de {1} caracteres.")]  [Required(ErrorMessage = "El campo {0} es requerido")]  [Display(Name = "Equipo")]  public string Name { get; set; }  [JsonIgnore]  [NotMapped]  public int IdCountry { get; set; }  [JsonIgnore]  public CountryEntity Country { get; set; }  [Display(Name = "Logo")]  public string LogoImagePath { get; set; }  public string LogoImageFullPath => string.IsNullOrEmpty(LogoImagePath)  ? $"http://keypress.serveftp.net:88/GenericAppApi/images/Logos/noimage.png"  : $"http://keypress.serveftp.net:88/GenericAppApi{LogoImagePath.Substring(1)}";  }  } |  |

## Actualizamos DataContext

|  |  |
| --- | --- |
| **DataContext** | **Comentarios** |
| using GenericApp.Web.Data.Entities;  using Microsoft.EntityFrameworkCore;  namespace GenericApp.Web.Data  {  public class DataContext : DbContext  {  public DataContext(DbContextOptions<DataContext> options) : base(options)  {  }  public DbSet<CityEntity> Cities { get; set; }  public DbSet<CountryEntity> Countries { get; set; }  public DbSet<DepartmentEntity> Departments { get; set; }  public DbSet<TeamEntity> Teams { get; set; }  protected override void OnModelCreating(ModelBuilder modelBuilder)  {  base.OnModelCreating(modelBuilder);  modelBuilder.Entity<CountryEntity>()  .HasIndex(t => t.Name)  .IsUnique();  modelBuilder.Entity<DepartmentEntity>(dep =>  {  dep.HasIndex("Name", "CountryId").IsUnique();  dep.HasOne(d => d.Country).WithMany(c => c.Departments).OnDelete(DeleteBehavior.Cascade);  });  modelBuilder.Entity<CityEntity>(cit =>  {  cit.HasIndex("Name", "DepartmentId").IsUnique();  cit.HasOne(c => c.Department).WithMany(d => d.Cities).OnDelete(DeleteBehavior.Cascade);  });  modelBuilder.Entity<TeamEntity>(dep =>  {  dep.HasIndex("Name", "CountryId").IsUnique();  dep.HasOne(d => d.Country).WithMany(c => c.Teams).OnDelete(DeleteBehavior.Cascade);  });  }  }  } |  |

## Actualizar Base de Datos

Guardamos los cambios y corremos los comandos para actualizar la base de datos:

PM> add-migration AddCityAndDepartment

PM> update-database

# ViewModels para manejar imágenes y/o combos

## CategoryViewModel

En el Proyecto **Web**, dentro de la carpeta **Models** creamos la Clase **CategoryViewModel**

|  |  |
| --- | --- |
| **CategoryViewModel** | **Comentarios** |
| using GenericApp.Web.Data.Entities;  using Microsoft.AspNetCore.Http;  using System.ComponentModel.DataAnnotations;  namespace GenericApp.Web.Models  {  public class CategoryViewModel:CategoryEntity  {  [Display(Name = "Imagen")]  public IFormFile ImageFile { get; set; }  }  } |  |

## ProductViewModel

En el Proyecto **Web**, dentro de la carpeta **Models** creamos la Clase **ProductViewModel**

|  |  |
| --- | --- |
| **ProductViewModel** | **Comentarios** |
| using Microsoft.AspNetCore.Http;  using Microsoft.AspNetCore.Mvc.Rendering;  using GenericApp.Web.Data.Entities;  using System.Collections.Generic;  using System.ComponentModel.DataAnnotations;  namespace GenericApp.Web.Models  {  public class ProductViewModel : ProductEntity  {  [Display(Name = "Categoría")]  [Range(1, int.MaxValue, ErrorMessage = "Debe seleccionar una categoría.")]  [Required(ErrorMessage = "El campo {0} es requerido")]  public int CategoryId { get; set; }  public IFormFile ImageFile { get; set; }  public IEnumerable<SelectListItem> Categories { get; set; }  [Display(Name = "Precio")]  [MaxLength(12)]  [RegularExpression(@"^\d+([\.\,]?\d+)?$", ErrorMessage = "Use sólo números o . o , para poner decimales")]  [Required]  public string PriceString { get; set; }  }  } |  |

## AddProductImageViewModel

En el Proyecto **Web**, dentro de la carpeta **Models** creamos la Clase **AddProductImageViewModel**

|  |  |
| --- | --- |
| **AddProductImageViewModel** | **Comentarios** |
| using Microsoft.AspNetCore.Http;  using System.ComponentModel.DataAnnotations;  namespace GenericApp.Web.Models  {  public class AddProductImageViewModel  {  public int ProductId { get; set; }  [Display(Name = "Imagen")]  [Required(ErrorMessage = "El campo {0} es requerido")]  public IFormFile ImageFile { get; set; }  }  } |  |

## CountryViewModel

|  |  |
| --- | --- |
| **CountryViewModel** | **Comentarios** |
| using GenericApp.Web.Data.Entities;  using Microsoft.AspNetCore.Http;  using System.ComponentModel.DataAnnotations;  namespace GenericApp.Web.Models  {  public class CountryViewModel : CountryEntity  {  [Display(Name = "Imagen")]  public IFormFile ImageFile { get; set; }  }  } |  |

## TeamViewModel

|  |  |
| --- | --- |
| **TeamViewModel** | **Comentarios** |
| using GenericApp.Web.Data.Entities;  using Microsoft.AspNetCore.Http;  using System.ComponentModel.DataAnnotations;  namespace GenericApp.Web.Models  {  public class TeamViewModel : TeamEntity  {  public int CountryId { get; set; }  [Display(Name = "Imagen")]  public IFormFile ImageFile { get; set; }  }  } |  |

# Responses

En el Proyecto **Common** creamos la Carpeta **Responses**

## Clase Response

Dentro de la Carpeta **Responses** creamos la Clase **Response**

|  |  |
| --- | --- |
| **Response** | **Comentarios** |
| namespace GenericApp.Common.Responses  {  public class Response  {  public bool IsSuccess { get; set; }  public string Message { get; set; }  public object Result { get; set; }  }  } |  |

## Clase TokenResponse

|  |  |
| --- | --- |
| **TokenResponse** | **Comentarios** |
| using System;  namespace GenericApp.Common.Responses  {  public class TokenResponse  {  public string Token { get; set; }  public UserResponse User { get; set; }  public DateTime Expiration { get; set; }  public DateTime ExpirationLocal => Expiration.ToLocalTime();  }  } |  |

## Clase CountryResponse

|  |  |
| --- | --- |
| **CountryResponse** | **Comentarios** |
| using System.Collections.Generic;  namespace GenericApp.Common.Responses  {  public class CountryResponse  {  public int Id { get; set; }  public string Name { get; set; }  public string FlagImagePath { get; set; }  public string FlagImageFullPath => string.IsNullOrEmpty(FlagImagePath)  ? $"http://keypress.serveftp.net:88/GenericAppApi/images/Flags/noimage.png"  : $"http://keypress.serveftp.net:88/GenericAppApi{FlagImagePath.Substring(1)}";  public ICollection<DepartmentResponse> Departments { get; set; }  public ICollection<TeamResponse> Teams { get; set; }  }  } |  |

## Clase DepartmentResponse

|  |  |
| --- | --- |
| **DepartmentResponse** | **Comentarios** |
| namespace GenericApp.Common.Responses  {  public class DepartmentResponse  {  public int Id { get; set; }  public string Name { get; set; }  public CountryResponse Country { get; set; }  public ICollection<CityResponse> Cities { get; set; }  }  } |  |

## Clase CityResponse

|  |  |
| --- | --- |
| **CityResponse** | **Comentarios** |
| namespace GenericApp.Common.Responses  {  public class CityResponse  {  public int Id { get; set; }  public string Name { get; set; }  public DepartmentResponse Department { get; set; }  }  } |  |

## Clase TeamResponse

|  |  |
| --- | --- |
| **TeamResponse** | **Comentarios** |
| namespace GenericApp.Common.Responses  {  public class TeamResponse  {  public int Id { get; set; }  public string Name { get; set; }  public CountryResponse Country { get; set; }  public string LogoImagePath { get; set; }  public string LogoImageFullPath => string.IsNullOrEmpty(LogoImagePath)  ? $"http://keypress.serveftp.net:88/GenericAppApi/images/Logos/noimage.png"  : $"http://keypress.serveftp.net:88/GenericAppApi{LogoImagePath.Substring(1)}";  }  } |  |

## Clase UserResponse

|  |  |
| --- | --- |
| **UserResponse** | **Comentarios** |
| using GenericApp.Common.Enums;  namespace GenericApp.Common.Responses  {  public class UserResponse  {  public string Id { get; set; }  public string Email { get; set; }  public string PhoneNumber { get; set; }  public string Document { get; set; }  public string FirstName { get; set; }  public string LastName { get; set; }  public string Address { get; set; }  public string PicturePath { get; set; }  public string PictureFullPath => string.IsNullOrEmpty(PicturePath)  ? $"http://keypress.serveftp.net:88/GenericAppiApi/images/Users/nouser.png"  : $"http://keypress.serveftp.net:88/GenericAppApi{PicturePath.Substring(1)}";  public UserType UserType { get; set; }  public CityResponse City { get; set; }  public TeamResponse FavoriteTeam { get; set; }  public string FullName => $"{FirstName} {LastName}";  public string FullNameWithDocument => $"{FirstName} {LastName} - {Document}";  }  } |  |

## Clase CategoryResponse

|  |  |
| --- | --- |
| **CategoryResponse** | **Comentarios** |
| namespace GenericApp.Common.Responses  {  public class CategoryResponse  {  public int Id { get; set; }  public string Name { get; set; }  public string ImagePath { get; set; }  public string ImageFullPath => string.IsNullOrEmpty(ImagePath)  ? $"http://keypress.serveftp.net:88/GenericAppApi/images/Categories/noimage.png"  : $"http://keypress.serveftp.net:88/GenericAppApi{ImagePath.Substring(1)}";  }  } |  |

## Clase ProductImageResponse

|  |  |
| --- | --- |
| **ProductImageResponse** | **Comentarios** |
| namespace GenericApp.Common.Responses  {  public class ProductImageResponse  {  public int Id { get; set; }  public string ImagePath { get; set; }  public string ImageFullPath => string.IsNullOrEmpty(ImagePath)  ? $"http://keypress.serveftp.net:88/GenericAppApi/images/Products/noimage.png"  : $"http://keypress.serveftp.net:88/GenericAppApi{ImagePath.Substring(1)}";  }  } |  |

## Clase ProductResponse

|  |  |
| --- | --- |
| **ProductResponse** | **Comentarios** |
| using System.Collections.Generic;  using System.Linq;  namespace GenericApp.Common.Responses  {  public class ProductResponse  {  public int Id { get; set; }  public string Name { get; set; }  public string Description { get; set; }  public decimal Price { get; set; }  public bool IsActive { get; set; }  public CategoryResponse Category { get; set; }  public ICollection<ProductImageResponse> ProductImages { get; set; }  public int ProductImagesNumber => ProductImages == null ? 0 : ProductImages.Count;  public string ImageFullPath => ProductImages == null || ProductImages.Count == 0  ? $"http://keypress.serveftp.net:88/GenericAppApi/images/Products/noimage.png"  : ProductImages.FirstOrDefault().ImageFullPath;  }  } |  |

# Requests

En el Proyecto **Common** creamos la Carpeta **Requests**

## Clase ChangePasswordRequest

|  |  |
| --- | --- |
| **ChangePasswordRequest** | **Comentarios** |
| using System.ComponentModel.DataAnnotations;  namespace GenericApp.Common.Requests  {  public class ChangePasswordRequest  {  [Required]  [StringLength(20, MinimumLength = 6)]  public string OldPassword { get; set; }  [Required]  [StringLength(20, MinimumLength = 6)]  public string NewPassword { get; set; }  }  } |  |

## Clase EmailRequest

|  |  |
| --- | --- |
| **EmailRequest** | **Comentarios** |
| using System.ComponentModel.DataAnnotations;  namespace GenericApp.Common.Requests  {  public class EmailRequest  {  [EmailAddress]  [Required]  public string Email { get; set; }  }  } |  |

## Clase TokenRequest

|  |  |
| --- | --- |
| **TokenRequest** | **Comentarios** |
| namespace GenericApp.Common.Requests  {  public class TokenRequest  {  public string Username { get; set; }  public string Password { get; set; }  }  } |  |

## Clase UserRequest

|  |  |
| --- | --- |
| **UserRequest** | **Comentarios** |
| using System.ComponentModel.DataAnnotations;  namespace GenericApp.Common.Requests  {  public class UserRequest  {  [Required]  public string Document { get; set; }  [Required]  public string FirstName { get; set; }  [Required]  public string LastName { get; set; }  [Required]  public string Address { get; set; }  [Required]  public string Email { get; set; }  [Required]  public string Phone { get; set; }  [Required]  [StringLength(20, MinimumLength = 6)]  public string Password { get; set; }  [StringLength(20, MinimumLength = 6)]  public string PasswordConfirm { get; set; }  [Required]  public int CityId { get; set; }  public byte[] PictureArray { get; set; }  [Required]  public int FavoriteTeamId { get; set; }  }  } |  |

# ImageHelper

En el Proyecto **Web** creamos una Carpeta llamada **Helpers**

Dentro creamos la Interfaz **IimageHelper**

|  |  |
| --- | --- |
| **IimageHelper** | **Comentarios** |
| using System.IO;  using System.Threading.Tasks;  using Microsoft.AspNetCore.Http;  namespace GenericApp.Web.Helpers  {  public interface IImageHelper  {  Task<string> UploadImageAsync(IFormFile imageFile, string folder);  string UploadImage(byte[] pictureArray, string folder);  Task<string> UploadImage2Async(Stream imageFile, string folder);  }  } |  |

Y creamos la implementación **ImageHelper**

|  |  |
| --- | --- |
| **ImageHelper** | **Comentarios** |
| using Microsoft.AspNetCore.Http;  using System;  using System.IO;  using System.Threading.Tasks;  namespace GenericApp.Web.Helpers  {  public class ImageHelper : IImageHelper  {  public async Task<string> UploadImageAsync(IFormFile imageFile, string folder)  {  string guid = Guid.NewGuid().ToString();  string file = $"{guid}.jpg";  string path = Path.Combine(  Directory.GetCurrentDirectory(),  $"wwwroot\\images\\{folder}",  file);  using (FileStream stream = new FileStream(path, FileMode.Create))  {  await imageFile.CopyToAsync(stream);  }  return $"~/images/{folder}/{file}";  }  public string UploadImage(byte[] pictureArray, string folder)  {  MemoryStream stream = new MemoryStream(pictureArray);  string guid = Guid.NewGuid().ToString();  string file = $"{guid}.jpg";  try  {  stream.Position = 0;  string path = Path.Combine(Directory.GetCurrentDirectory(), $"wwwroot\\images\\{folder}", file);  File.WriteAllBytes(path, stream.ToArray());  }  catch  {  return string.Empty;  }  return $"~/images/{folder}/{file}";  }  public async Task<string> UploadImage2Async(Stream imageFile, string folder)  {  string guid = Guid.NewGuid().ToString();  string file = $"{guid}.jpg";  string path = Path.Combine(  Directory.GetCurrentDirectory(),  $"wwwroot\\images\\{folder}",  file);  using (FileStream stream = new FileStream(path, FileMode.Create))  {  await imageFile.CopyToAsync(stream);  }  return $"~/images/{folder}/{file}";  }  }  } |  |

Agregamos la inyección en el archivo **Startup.cs**

|  |  |
| --- | --- |
| **Startup.cs** | **Comentarios** |
| public void ConfigureServices(IServiceCollection services)  {  services.Configure<CookiePolicyOptions>(options =>  {  options.CheckConsentNeeded = context => true;  options.MinimumSameSitePolicy = SameSiteMode.None;  });  services.AddDbContext<DataContext>(cfg =>  {  cfg.UseSqlServer(Configuration.GetConnectionString("DefaultConnection"));  });    services.AddTransient<SeedDb>();  services.AddScoped<IImageHelper, ImageHelper>();  services.AddMvc().SetCompatibilityVersion(CompatibilityVersion.Version\_2\_1);  } |  |

# CombosHelper

En el Proyecto **Web**, en la Carpeta llamada **Helpers,** creamos la Interfaz **ICombosHelper**

|  |  |
| --- | --- |
| **ICombosHelper** | **Comentarios** |
| using Microsoft.AspNetCore.Mvc.Rendering;  using System.Collections.Generic;  namespace GenericApp.Web.Helpers  {  public interface ICombosHelper  {  IEnumerable<SelectListItem> GetComboCategories();  IEnumerable<SelectListItem> GetComboCountries();  IEnumerable<SelectListItem> GetComboDepartments(int countryId);  IEnumerable<SelectListItem> GetComboCities(int departmentId);  IEnumerable<SelectListItem> GetComboTeams(int countryId);  IEnumerable<SelectListItem> GetComboUserTypes();  }  } |  |

Y creamos la implementación **CombosHelper**

|  |  |
| --- | --- |
| **CombosHelper** | **Comentarios** |
| using Microsoft.AspNetCore.Mvc.Rendering;  using Microsoft.EntityFrameworkCore;  using GenericApp.Web.Data.Entities;  using GenericApp.Web.Data;  using System.Collections.Generic;  using System.Linq;  namespace GenericApp.Web.Helpers  {  public class CombosHelper : ICombosHelper  {  private readonly DataContext \_context;  public CombosHelper(DataContext context)  {  \_context = context;  }  public IEnumerable<SelectListItem> GetComboCategories()  {  List<SelectListItem> list = \_context.Categories.Select(t => new SelectListItem  {  Text = t.Name,  Value = $"{t.Id}"  })  .OrderBy(t => t.Text)  .ToList();  list.Insert(0, new SelectListItem  {  Text = "[Seleccione una categoría...]",  Value = "0"  });  return list;  }  public IEnumerable<SelectListItem> GetComboCities(int departmentId)  {  List<SelectListItem> list = new List<SelectListItem>();  DepartmentEntity department = \_context.Departments  .Include(d => d.Cities)  .FirstOrDefault(d => d.Id == departmentId);  if (department != null)  {  list = department.Cities.Select(t => new SelectListItem  {  Text = t.Name,  Value = $"{t.Id}"  })  .OrderBy(t => t.Text)  .ToList();  }  list.Insert(0, new SelectListItem  {  Text = "[Seleccione una ciudad...]",  Value = "0"  });  return list;  }  public IEnumerable<SelectListItem> GetComboCountries()  {  List<SelectListItem> list = \_context.Countries.Select(t => new SelectListItem  {  Text = t.Name,  Value = $"{t.Id}"  })  .OrderBy(t => t.Text)  .ToList();  list.Insert(0, new SelectListItem  {  Text = "[Seleccione un país...]",  Value = "0"  });  return list;  }  public IEnumerable<SelectListItem> GetComboDepartments(int countryId)  {  List<SelectListItem> list = new List<SelectListItem>();  CountryEntity country = \_context.Countries  .Include(c => c.Departments)  .FirstOrDefault(c => c.Id == countryId);  if (country != null)  {  list = country.Departments.Select(t => new SelectListItem  {  Text = t.Name,  Value = $"{t.Id}"  })  .OrderBy(t => t.Text)  .ToList();  }  list.Insert(0, new SelectListItem  {  Text = "[Seleccione una provincia...]",  Value = "0"  });  return list;  }  public IEnumerable<SelectListItem> GetComboTeams(int countryId)  {  List<SelectListItem> list = new List<SelectListItem>();  CountryEntity country = \_context.Countries  .Include(c => c.Teams)  .FirstOrDefault(c => c.Id == countryId);  if (country != null)  {  list = country.Teams.Select(t => new SelectListItem  {  Text = t.Name,  Value = $"{t.Id}"  })  .OrderBy(t => t.Text)  .ToList();  }  list.Insert(0, new SelectListItem  {  Text = "[Seleccione un equipo...]",  Value = "0"  });  return list;  }  public IEnumerable<SelectListItem> GetComboUserTypes()  {  List<SelectListItem> list = new List<SelectListItem>();  list.Insert(0, new SelectListItem  {  Text = "[Seleccione un Tipo de Usuario...]",  Value = "0"  });  list.Insert(0, new SelectListItem  {  Text = "Admin",  Value = "1"  });  list.Insert(0, new SelectListItem  {  Text = "User",  Value = "2"  });  return list;  }  }  } |  |

Agregamos la inyección en el archivo **Startup.cs**

|  |  |
| --- | --- |
| **Startup.cs** | **Comentarios** |
| public void ConfigureServices(IServiceCollection services)  {  services.Configure<CookiePolicyOptions>(options =>  {  options.CheckConsentNeeded = context => true;  options.MinimumSameSitePolicy = SameSiteMode.None;  });  services.AddDbContext<DataContext>(cfg =>  {  cfg.UseSqlServer(Configuration.GetConnectionString("DefaultConnection"));  });    services.AddTransient<SeedDb>();  services.AddScoped<IImageHelper, ImageHelper>();  services.AddScoped<IConverterHelper, ConverterHelper>();  services.AddScoped<ICombosHelper, CombosHelper>();  services.AddMvc().SetCompatibilityVersion(CompatibilityVersion.Version\_2\_1);  } |  |

# ConverterHelper

En el Proyecto **Web** dentro de la Carpeta **Helpers,** creamos la Interfaz **IconverterHelper**

|  |  |
| --- | --- |
| **IconverterHelper** | **Comentarios** |
| using GenericApp.Web.Data.Entities;  using GenericApp.Web.Models;  using System.Threading.Tasks;  namespace GenericApp.Web.Helpers  {  public interface IConverterHelper  {  CategoryEntity ToCategoryEntity(CategoryViewModel model, string path, bool isNew);  CategoryViewModel ToCategoryViewModel(CategoryEntity categoryEntity);  Task<ProductEntity> ToProductAsync(ProductViewModel model, bool isNew);  ProductViewModel ToProductViewModel(ProductEntity product);  CountryEntity ToCountryEntity(CountryViewModel model, string path, bool isNew);  CountryViewModel ToCountryViewModel(CountryEntity countryEntity);  TeamEntity ToTeamEntity(TeamViewModel model, string path,bool isNew);  TeamViewModel ToTeamViewModel(TeamEntity product);  }  } |  |

Creamos la implementación **ConverterHelper**

|  |  |
| --- | --- |
| **ConverterHelper** | **Comentarios** |
| using GenericApp.Web.Data;  using GenericApp.Web.Data.Entities;  using GenericApp.Web.Models;  using System.Globalization;  using System.Threading.Tasks;  namespace GenericApp.Web.Helpers  {  public class ConverterHelper : IConverterHelper  {  private readonly DataContext \_context;  private readonly ICombosHelper \_combosHelper;  public ConverterHelper(DataContext context, ICombosHelper combosHelper)  {  \_context = context;  \_combosHelper = combosHelper;  }  public CategoryEntity ToCategoryEntity(CategoryViewModel model, string path, bool isNew)  {  return new CategoryEntity  {  Id = isNew ? 0 : model.Id,  ImagePath = path,  Name = model.Name  };  }  public CategoryViewModel ToCategoryViewModel(CategoryEntity categoryEntity)  {  return new CategoryViewModel  {  Id = categoryEntity.Id,  ImagePath = categoryEntity.ImagePath,  Name = categoryEntity.Name  };  }  public async Task<ProductEntity> ToProductAsync(ProductViewModel model, bool isNew)  {  return new ProductEntity  {  Category = await \_context.Categories.FindAsync(model.CategoryId),  Description = model.Description,  Id = isNew ? 0 : model.Id,  IsActive = model.IsActive,  Name = model.Name,  Price = ToPrice(model.PriceString),  ProductImages = model.ProductImages  };  }  private decimal ToPrice(string priceString)  {  string nds = CultureInfo.CurrentCulture.NumberFormat.NumberDecimalSeparator;  if (nds == ".")  {  priceString = priceString.Replace(',', '.');  }  else  {  priceString = priceString.Replace('.', ',');  }  return decimal.Parse(priceString);  }  public ProductViewModel ToProductViewModel(ProductEntity product)  {  return new ProductViewModel  {  Categories = \_combosHelper.GetComboCategories(),  Category = product.Category,  CategoryId = product.Category.Id,  Description = product.Description,  Id = product.Id,  IsActive = product.IsActive,  Name = product.Name,  PriceString = $"{product.Price}",  ProductImages = product.ProductImages,  };  }  public CountryEntity ToCountryEntity(CountryViewModel model, string path, bool isNew)  {  return new CountryEntity  {  Id = isNew ? 0 : model.Id,  FlagImagePath = path,  Name = model.Name  };  }  public CountryViewModel ToCountryViewModel(CountryEntity countryEntity)  {  return new CountryViewModel  {  Id = countryEntity.Id,  FlagImagePath= countryEntity.FlagImagePath,  Name = countryEntity.Name  };  }    public TeamEntity ToTeamEntity(TeamViewModel model, string path, bool isNew)  {  return new TeamEntity  {  Id = isNew ? 0 : model.Id,  LogoImagePath = path,  Name = model.Name,  IdCountry=model.IdCountry,  Country = model.Country,  };  }    public TeamViewModel ToTeamViewModel(TeamEntity team)  {  return new TeamViewModel  {  Countries = \_combosHelper.GetComboCountries(),  Country= team.Country,  CountryId=team.Country.Id,  Id = team.Id,  Name = team.Name,  LogoImagePath=team.LogoImagePath,  };  }  }  } |  |

Agregamos la inyacción en el archivo **Startup.cs**

|  |  |
| --- | --- |
| **Startup.cs** | **Comentarios** |
| public void ConfigureServices(IServiceCollection services)  {  services.Configure<CookiePolicyOptions>(options =>  {  options.CheckConsentNeeded = context => true;  options.MinimumSameSitePolicy = SameSiteMode.None;  });  services.AddDbContext<DataContext>(cfg =>  {  cfg.UseSqlServer(Configuration.GetConnectionString("DefaultConnection"));  });    services.AddTransient<SeedDb>();  services.AddScoped<IImageHelper, ImageHelper>();  services.AddScoped<IConverterHelper, ConverterHelper>();  services.AddMvc().SetCompatibilityVersion(CompatibilityVersion.Version\_2\_1);  } |  |

# IMailHelper

En el Proyecto **Web** dentro de la Carpeta **Helpers,** creamos la Interfaz **IMailHelper**

|  |  |
| --- | --- |
| **IMailHelper** | **Comentarios** |
| using GenericApp.Common.Responses;  namespace GenericApp.Web.Helpers  {  public interface IMailHelper  {  Response SendMail(string to, string subject, string body);  }  } |  |

Creamos la implementación **MailHelper**

|  |  |
| --- | --- |
| **MailHelper** | **Comentarios** |
| using MailKit.Net.Smtp;  using Microsoft.Extensions.Configuration;  using MimeKit;  using GenericApp.Common.Responses;  using System;  namespace GenericApp.Web.Helpers  {  public class MailHelper : IMailHelper  {  private readonly IConfiguration \_configuration;  public MailHelper(IConfiguration configuration)  {  \_configuration = configuration;  }  public Response SendMail(string to, string subject, string body)  {  try  {  string from = \_configuration["Mail:From"];  string smtp = \_configuration["Mail:Smtp"];  string port = \_configuration["Mail:Port"];  string password = \_configuration["Mail:Password"];  MimeMessage message = new MimeMessage();  message.From.Add(new MailboxAddress(from));  message.To.Add(new MailboxAddress(to));  message.Subject = subject;  BodyBuilder bodyBuilder = new BodyBuilder  {  HtmlBody = body  };  message.Body = bodyBuilder.ToMessageBody();  using (SmtpClient client = new SmtpClient())  {  client.Connect(smtp, int.Parse(port), false);  client.Authenticate(from, password);  client.Send(message);  client.Disconnect(true);  }  return new Response { IsSuccess = true };  }  catch (Exception ex)  {  return new Response  {  IsSuccess = false,  Message = ex.Message,  Result = ex  };  }  }  }  } |  |

Agregamos la inyección en el archivo **Startup.cs**

|  |  |
| --- | --- |
| **Startup.cs** | **Comentarios** |
| services.AddTransient<SeedDb>();  services.AddScoped<IImageHelper, ImageHelper>();  services.AddScoped<IConverterHelper, ConverterHelper>();  services.AddScoped<ICombosHelper, CombosHelper>();  services.AddScoped<IUserHelper, UserHelper>();  services.AddScoped<IMailHelper, MailHelper>(); |  |

# Maestro detalle MVC para Countries

## Vista Index

Modificamos la vista **Index** de **CountriesController**:

|  |  |
| --- | --- |
| **Index** | **Comentarios** |
| <thead>  <tr>  <th>  @Html.DisplayNameFor(model => model.Name)  </th>  <th>  @Html.DisplayNameFor(model => model.DepartmentsNumber)  </th>  <th>  @Html.DisplayNameFor(model => model.TeamsNumber)  </th>  <th></th>  </tr>  </thead>  <tbody>  @foreach (var item in Model)  {  <tr>  <td>  @Html.DisplayFor(modelItem => item.Name)  </td>  <td>  @Html.DisplayFor(modelItem => item.DepartmentsNumber)  </td>  <td>  @Html.DisplayFor(modelItem => item. TeamsNumber)  </td>  <td>  <a **asp-action**="Edit" **asp-route-id**="@item.Id" class="btn btn-warning"><i class="glyphicon glyphicon-pencil"></i></a>  <a **asp-action**="Details" **asp-route-id**="@item.Id" class="btn btn-info"><i class="glyphicon glyphicon-align-justify"></i></a>  <button data-id="@item.Id" class="btn btn-danger deleteItem" data-toggle="modal" data-target="#deleteDialog"><i class="glyphicon glyphicon-trash"></i></button>  </td>  </tr>  }  </tbody> |  |

## Métodos Index y Details del controlador CountriesController:

Modificamos los métodos **Index** y **Details** del controlador **CountriesController**:

|  |  |
| --- | --- |
| **CountriesController** | **Comentarios** |
| // GET: Countries  public async Task<IActionResult> Index()  {  return View(await \_context.Countries  .Include(c => c.Departments)  .Include(t => t.Teams)  .ToListAsync());  }  // GET: Countries/Details/5  public async Task<IActionResult> Details(int? id)  {  if (id == null)  {  return NotFound();  }  var country = await \_context.Countries  .Include(c => c.Departments)  .ThenInclude(d => d.Cities)  .Include(t => t.Teams)  .FirstOrDefaultAsync(m => m.Id == id);  if (country == null)  {  return NotFound();  }  return View(country);  } |  |

## Vista Details del controlador Countries:

Modificamos la vista **Details** del controlador **CountriesController**:

|  |  |
| --- | --- |
| **Details** | **Comentarios** |
| @model GenericApp.Web.Data.Entities.CountryEntity  @{  ViewData["Title"] = "Details";  }  <link rel="stylesheet" href="https://cdn.datatables.net/1.10.19/css/jquery.dataTables.min.css" />  <h2>  <img src="@Url.Content(Model.FlagImagePath)" alt="Image" style="width:100;height:100px;max-height: 100%; width: auto;" />  @Html.DisplayFor(model => model.Name)  </h2>  <div>  <h4></h4>  <hr />  <div class="row">  <div class="col-md-4">  <dl class="dl-horizontal">  <dt>  @Html.DisplayNameFor(model => model.DepartmentsNumber)  </dt>  <dd>  @Html.DisplayFor(model => model.DepartmentsNumber)  </dd>  <dt>  @Html.DisplayNameFor(model => model.TeamsNumber)  </dt>  <dd>  @Html.DisplayFor(model => model.TeamsNumber)  </dd>  </dl>  </div>    <div>  <a **asp-action**="AddDepartment" **asp-route-id**="@Model.Id" class="btn btn-primary"><i class="glyphicon glyphicon-plus"></i> Provincia</a>  <a **asp-action**="AddTeam" **asp-route-id**="@Model.Id" class="btn btn-primary"><i class="glyphicon glyphicon-plus"></i> Equipo</a>  <a **asp-action**="Edit" **asp-route-id**="@Model.Id" class="btn btn-warning">Editar</a>  <a **asp-action**="Index" class="btn btn-success">Regresar</a>  </div>  <hr />  <div class="row">  <div class="col-md-6">  <div class="panel panel-default">  <div class="panel-heading">  <h3 class="panel-title">Provincias</h3>  </div>  <div class="panel-body">  <table class="table table-hover table-responsive table-striped" id="MyTableDepartments">  <thead>  <tr>  <th>  @Html.DisplayNameFor(model => model.Departments.FirstOrDefault().Name)  </th>  <th>  @Html.DisplayNameFor(model => model.Departments.FirstOrDefault().CitiesNumber)  </th>  <th></th>  </tr>  </thead>  <tbody>  @foreach (var item in Model.Departments)  {  <tr>  <td>  @Html.DisplayFor(modelItem => item.Name)  </td>  <td>  @Html.DisplayFor(modelItem => item.CitiesNumber)  </td>  <td>  <a **asp-action**="EditDepartment" **asp-route-id**="@item.Id" class="btn btn-warning"><i class="glyphicon glyphicon-pencil"></i></a>  <a **asp-action**="DetailsDepartment" **asp-route-id**="@item.Id" class="btn btn-info"><i class="glyphicon glyphicon-align-justify"></i></a>  <button data-id="@item.Id" class="btn btn-danger deleteDepartment" data-toggle="modal" data-target="#deleteDialog"><i class="glyphicon glyphicon-trash"></i></button>  </td>  </tr>  }  </tbody>  </table>  </div>  </div>  </div>  <div class="col-md-6">  <div class="panel panel-default">  <div class="panel-heading">  <h3 class="panel-title">Equipos</h3>  </div>  <div class="panel-body">  <table class="table table-hover table-responsive table-striped" id="MyTableTeams">  <thead>  <tr>  <th>  @Html.DisplayNameFor(model => model.Teams.FirstOrDefault().Name)  </th>  <th>  @Html.DisplayNameFor(model => model.Teams.FirstOrDefault().LogoImagePath)  </th>  <th></th>  </tr>  </thead>  <tbody>  @foreach (var item in Model.Teams)  {  <tr>  <td>  @Html.DisplayFor(modelItem => item.Name)  </td>  <td>  @if (!string.IsNullOrEmpty(item.LogoImagePath))  {  <img src="@Url.Content(item.LogoImagePath)" alt="Image" style="width:50px;height:50px;max-width: 100%; height: auto;" />  }  else  {  <img src="@Url.Content(item.LogoImagePath)" alt="Image" style="width:50px;height:50px;max-width: 100%; height: auto;" />  }  </td>  <td>  <a **asp-action**="EditTeam" **asp-route-id**="@item.Id" class="btn btn-warning"><i class="glyphicon glyphicon-pencil"></i></a>  <button data-id="@item.Id" class="btn btn-danger deleteTeam" data-toggle="modal" data-target="#deleteDialog"><i class="glyphicon glyphicon-trash"></i></button>  </td>  </tr>  }  </tbody>  </table>  </div>  </div>  </div>  </div>  <**partial** **name**="\_DeleteDialog" />  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  <script src="//cdn.datatables.net/1.10.19/js/jquery.dataTables.min.js"></script>  <script type="text/javascript">  $(document).ready(function () {  $('#MyTableDepartments').DataTable();  $('#MyTableTeams').DataTable();  // Delete item  var item\_to\_delete;  var action\_to\_delete;  $('.deleteDepartment').click((e) => {  item\_to\_delete = e.currentTarget.dataset.id;  action\_to\_delete = 1;  });  $('.deleteTeam').click((e) => {  item\_to\_delete = e.currentTarget.dataset.id;  action\_to\_delete = 2;  });  $("#btnYesDelete").click(function () {  if (action\_to\_delete == 1) {  window.location.href = '/Countries/DeleteDepartment/' + item\_to\_delete;  } else {  window.location.href = '/Countries/DeleteTeam/' + item\_to\_delete;  }  });  });  </script>  } | Para que funcionen botones Borrar en 2 Tablas tener en cuenta….  <-Nombre de primer tabla  En class dice “deleteDepartment”  <-Nombre de segunda tabla  En class dice “deleteTeam”  Nombre primer Tabla  Nombre segunda Tabla  deleteDepartment  deleteTeam  Ruta método DeleteDepartment  Ruta método DeleteTeam |

## Método AddDepartment

Agregamos al controlador **CountriesController** el método **AddDepartment**

|  |  |
| --- | --- |
| **CountriesController** | **Comentarios** |
| public async Task<IActionResult> AddDepartment(int? id)  {  if (id == null)  {  return NotFound();  }  CountryEntity country = await \_context.Countries.FindAsync(id);  if (country == null)  {  return NotFound();  }  DepartmentEntity model = new DepartmentEntity { IdCountry = country.Id };  return View(model);  }  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> AddDepartment(DepartmentEntity department)  {  if (ModelState.IsValid)  {  CountryEntity country = await \_context.Countries  .Include(c => c.Departments)  .FirstOrDefaultAsync(c => c.Id == department.IdCountry);  if (country == null)  {  return NotFound();  }  try  {  department.Id = 0;  country.Departments.Add(department);  \_context.Update(country);  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(Details)}/{country.Id}");  }  catch (DbUpdateException dbUpdateException)  {  if (dbUpdateException.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "Hay un registro con el mismo nombre.");  }  else  {  ModelState.AddModelError(string.Empty, dbUpdateException.InnerException.Message);  }  }  catch (Exception exception)  {  ModelState.AddModelError(string.Empty, exception.Message);  }  }  return View(department);  } |  |

Adicionamos la vista parcial **\_Department**:

|  |  |
| --- | --- |
| **\_Department** | **Comentarios** |
| @model GenericApp.Web.Data.Entities.DepartmentEntity  <div class="form-group">  <label **asp-for**="Name" class="control-label"></label>  <input **asp-for**="Name" class="form-control" />  <span **asp-validation-for**="Name" class="text-danger"></span>  </div> |  |

Adicionamos la vista **AddDepartment**:

|  |  |
| --- | --- |
| **AddDepartment** | **Comentarios** |
| @model GenericApp.Web.Data.Entities.DepartmentEntity  @{  ViewData["Title"] = "Add Department";  }  <h2>Agregar nueva Provincia</h2>  <h4></h4>  <hr />  <div class="row">  <div class="col-md-4">  <form **asp-action**="AddDepartment">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <input **type**="hidden" **asp-for**="IdCountry" />  <**partial** **name**="\_Department" />  <div class="form-group">  <input type="submit" value="Grabar" class="btn btn-primary" />  <a **asp-action**="Details" **asp-route-id**="@Model.IdCountry" class="btn btn-success">Regresar</a>  </div>  </form>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  } |  |

## Método AddTeam

Agregamos al controlador **CountriesController** el método **AddTeam**

|  |  |
| --- | --- |
| **CountriesController** | **Comentarios** |
| public async Task<IActionResult> AddTeam(int? id)  {  if (id == null)  {  return NotFound();  }  CountryEntity country = await \_context.Countries.FindAsync(id);  if (country == null)  {  return NotFound();  }  var model = new TeamViewModel  {  CountryId = country.Id,  IdCountry = country.Id,  };  return View(model);  }  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> AddTeam(TeamViewModel model)  {  if (ModelState.IsValid)  {  var path = string.Empty;  if (model.ImageFile != null)  {  path = await \_imageHelper.UploadImageAsync(model.ImageFile, "Teams");  }  CountryEntity country = await \_context.Countries  .Include(c => c.Teams)  .FirstOrDefaultAsync(c => c.Id == model.CountryId);  if (country == null)  {  return NotFound();  }  TeamEntity team = \_converterHelper.ToTeamEntity(model, path, true);  team.Country = country;  \_context.Add(team);  try  {  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(Details)}/{country.Id}");  }  catch (Exception ex)  {  if (ex.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "Este Equipo ya existe");  }  else  {  ModelState.AddModelError(string.Empty, ex.InnerException.Message);  }  }  }  return View(model);  } |  |

Adicionamos la vista parcial **\_Team**:

|  |  |
| --- | --- |
| **\_Team** | **Comentarios** |
| @model GenericApp.Web.Models.TeamViewModel  <div class="form-group">  <label **asp-for**="Name" class="control-label"></label>  <input **asp-for**="Name" class="form-control" />  <span **asp-validation-for**="Name" class="text-danger"></span>  </div>  <div class="form-group">  <label **asp-for**="ImageFile" class="control-label"></label>  <input **asp-for**="ImageFile" **type**="file" class="form-control" />  <span **asp-validation-for**="ImageFile" class="text-danger"></span>  </div> |  |

Adicionamos la vista **AddTeam**

|  |  |
| --- | --- |
| **AddTeam** | **Comentarios** |
| @model GenericApp.Web.Models.TeamViewModel  @{  ViewData["Title"] = "Add Team";  }  <h2>Agregar nuevo Equipo</h2>  <h4></h4>  <hr />  <div class="row">  <div class="col-md-4">    <form **asp-action**="AddTeam" enctype="multipart/form-data">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <input **type**="hidden" **asp-for**="CountryId" />  <input **type**="hidden" **asp-for**="IdCountry" />  <**partial** **name**="\_Team" />  <div class="form-group">  <input type="submit" value="Grabar" class="btn btn-primary" />  <a **asp-action**="Details" **asp-route-id**="@Model.CountryId" class="btn btn-success">Regresar</a>  </div>  </form>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  } |  |

## Método EditDepartment

Agregamos al controlador **CountriesController** el método **EditDepartment**

|  |  |
| --- | --- |
| **EditDepartment** | **Comentarios** |
| public async Task<IActionResult> EditDepartment(int? id)  {  if (id == null)  {  return NotFound();  }  DepartmentEntity department = await \_context.Departments.FindAsync(id);  if (department == null)  {  return NotFound();  }  CountryEntity country = await \_context.Countries.FirstOrDefaultAsync(c => c.Departments.FirstOrDefault(d => d.Id == department.Id) != null);  department.IdCountry = country.Id;  return View(department);  }  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> EditDepartment(DepartmentEntity department)  {  if (ModelState.IsValid)  {  try  {  \_context.Update(department);  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(Details)}/{department.IdCountry}");  }  catch (DbUpdateException dbUpdateException)  {  if (dbUpdateException.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "Hay un registro con el mismo nombre.");  }  else  {  ModelState.AddModelError(string.Empty, dbUpdateException.InnerException.Message);  }  }  catch (Exception exception)  {  ModelState.AddModelError(string.Empty, exception.Message);  }  }  return View(department);  } |  |

Adicionamos la vista **EditDepartment**:

|  |  |
| --- | --- |
| **EditDepartment** | **Comentarios** |
| @model GenericApp.Web.Data.Entities.DepartmentEntity  @{  ViewData["Title"] = "Edit";  }  <h2>Editar Provincia</h2>  <h4></h4>  <hr />  <div class="row">  <div class="col-md-4">  <form **asp-action**="EditDepartment">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <input **type**="hidden" **asp-for**="Id" />  <input **type**="hidden" **asp-for**="IdCountry" />  <**partial** **name**="\_Department" />  <div class="form-group">  <input type="submit" value="Grabar" class="btn btn-primary" />  <a **asp-action**="Details" **asp-route-id**="@Model.IdCountry" class="btn btn-success">Regresar</a>  </div>  </form>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  } |  |

## Método EditTeam

Agregamos al controlador **CountriesController** el método **EditTeam**

|  |  |
| --- | --- |
| **EditTeam** | **Comentarios** |
| public async Task<IActionResult> EditTeam(int? id)  {  if (id == null)  {  return NotFound();  }  TeamEntity team = await \_context.Teams.FindAsync(id);  if (team == null)  {  return NotFound();  }  CountryEntity country = await \_context.Countries.FirstOrDefaultAsync(c => c.Teams.FirstOrDefault(d => d.Id == team.Id) != null);  team.IdCountry = country.Id;  TeamViewModel model = \_converterHelper.ToTeamViewModel(team);  return View(model);  }  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> EditTeam(TeamViewModel model)  {  if (ModelState.IsValid)  {  var path = model.LogoImagePath;  if (model.ImageFile != null)  {  path = await \_imageHelper.UploadImageAsync(model.ImageFile, "Teams");  }  try  {  TeamEntity team = \_converterHelper.ToTeamEntity(model, path,false);  \_context.Update(team);  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(Details)}/{model.CountryId}");  }  catch (DbUpdateException dbUpdateException)  {  if (dbUpdateException.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "Hay un registro con el mismo nombre.");  }  else  {  ModelState.AddModelError(string.Empty, dbUpdateException.InnerException.Message);  }  }  catch (Exception exception)  {  ModelState.AddModelError(string.Empty, exception.Message);  }  }  return View(model);  } |  |

Adicionamos la vista **EditTeam**:

|  |  |
| --- | --- |
| **EditTeam** | **Comentarios** |
| @model GenericApp.Web.Models.TeamViewModel  @{  ViewData["Title"] = "Edit";  }  <h2>Editar Equipo</h2>  <h4></h4>  <hr />  <div class="row">  <div class="col-md-4">  <form **asp-action**="EditTeam" enctype="multipart/form-data">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <input **type**="hidden" **asp-for**="Id" />  <input **type**="hidden" **asp-for**="CountryId" />  <**partial** **name**="\_Team" />  <div class="form-group">  <input type="submit" value="Grabar" class="btn btn-primary" />  <a **asp-action**="Details" **asp-route-id**="@Model.CountryId" class="btn btn-success">Regresar</a>  </div>  </form>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  } |  |

## Método DeleteDepartment

Agregamos al controlador **CountriesController** el método **DeleteDepartment**

|  |  |
| --- | --- |
| **DeleteDepartment** | **Comentarios** |
| public async Task<IActionResult> DeleteDepartment(int? id)  {  if (id == null)  {  return NotFound();  }  DepartmentEntity department = await \_context.Departments  .Include(d => d.Cities)  .FirstOrDefaultAsync(m => m.Id == id);  if (department == null)  {  return NotFound();  }  CountryEntity country = await \_context.Countries.FirstOrDefaultAsync(c => c.Departments.FirstOrDefault(d => d.Id == department.Id) != null);  \_context.Departments.Remove(department);  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(Details)}/{country.Id}");  } |  |

## Método DeleteTeam

Agregamos al controlador **CountriesController** el método **DeleteTeam**

|  |  |
| --- | --- |
| **DeleteTeam** | **Comentarios** |
| public async Task<IActionResult> DeleteTeam(int? id)  {  if (id == null)  {  return NotFound();  }  TeamEntity team = await \_context.Teams  .FirstOrDefaultAsync(m => m.Id == id);  if (team == null)  {  return NotFound();  }  CountryEntity country = await \_context.Countries.FirstOrDefaultAsync(c => c.Teams.FirstOrDefault(d => d.Id == team.Id) != null);  \_context.Teams.Remove(team);  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(Details)}/{country.Id}");  } |  |

## Borrado en cascada de Países que tengan Provincias y/o Equipos

Para borrar en cascada un país que tenga matriculados provincias y/o equipos, modificamos el método **Delete** en **CountriesController**:

|  |  |
| --- | --- |
| **CountriesController** | **Comentarios** |
| public async Task<IActionResult> Delete(int? id)  {  if (id == null)  {  return NotFound();  }  CountryEntity country = await \_context.Countries  .Include(c => c.Departments)  .ThenInclude(d => d.Cities)  .Include(t => t.Teams)  .FirstOrDefaultAsync(m => m.Id == id);  if (country == null)  {  return NotFound();  }  \_context.Countries.Remove(country);  await \_context.SaveChangesAsync();  return RedirectToAction(nameof(Index));  } |  |

## Método DetailsDepartment

Agregamos al controlador **CountriesController** el método **DetailsDepartments**

|  |  |
| --- | --- |
| **CountriesController** | **Comentarios** |
| public async Task<IActionResult> DetailsDepartment(int? id)  {  if (id == null)  {  return NotFound();  }  DepartmentEntity department = await \_context.Departments  .Include(d => d.Cities)  .FirstOrDefaultAsync(m => m.Id == id);  if (department == null)  {  return NotFound();  }  CountryEntity country = await \_context.Countries.FirstOrDefaultAsync(c => c.Departments.FirstOrDefault(d => d.Id == department.Id) != null);  department.IdCountry = country.Id;  return View(department);  } |  |

Adicionamos la vista **DetailsDepartments**:

|  |  |
| --- | --- |
| **DetailsDepartments** | **Comentarios** |
| @model GenericApp.Common.Entities.Department  @{  ViewData["Title"] = "Details";  }  <link rel="stylesheet" href="https://cdn.datatables.net/1.10.19/css/jquery.dataTables.min.css" />  <h2>Detalle Provincia</h2>  <div>  <h4> </h4>  <hr />  <dl class="dl-horizontal">  <dt>  @Html.DisplayNameFor(model => model.Name)  </dt>  <dd>  @Html.DisplayFor(model => model.Name)  </dd>  <dt>  @Html.DisplayNameFor(model => model.CitiesNumber)  </dt>  <dd>  @Html.DisplayFor(model => model.CitiesNumber)  </dd>  </dl>  </div>  <div>  <a **asp-action**="AddCity" **asp-route-id**="@Model.Id" class="btn btn-primary"><i class="glyphicon glyphicon-plus"></i> City</a>  <a **asp-action**="Edit" **asp-route-id**="@Model.Id" class="btn btn-warning">Edit</a>  <a **asp-action**="Details" **asp-route-id**="@Model.IdCountry" class="btn btn-success">Back to List</a>  </div>  <br />  <div class="row">  <div class="col-md-12">  <div class="panel panel-default">  <div class="panel-heading">  <h3 class="panel-title">Cities</h3>  </div>  <div class="panel-body">  <table class="table table-hover table-responsive table-striped" id="MyTable">  <thead>  <tr>  <th>  @Html.DisplayNameFor(model => model.Cities.FirstOrDefault().Name)  </th>  <th></th>  </tr>  </thead>  <tbody>  @foreach (var item in Model.Cities)  {  <tr>  <td>  @Html.DisplayFor(modelItem => item.Name)  </td>  <td>  <a **asp-action**="EditCity" **asp-route-id**="@item.Id" class="btn btn-warning"><i class="glyphicon glyphicon-pencil"></i></a>  <button data-id="@item.Id" class="btn btn-danger deleteItem" data-toggle="modal" data-target="#deleteDialog"><i class="glyphicon glyphicon-trash"></i></button>  </td>  </tr>  }  </tbody>  </table>  </div>  </div>  </div>  </div>  <**partial** **name**="\_DeleteDialog" />  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  <script src="//cdn.datatables.net/1.10.19/js/jquery.dataTables.min.js"></script>  <script src="/js/deleteDialog.js"></script>  <script type="text/javascript">  $(document).ready(function () {  $('#MyTable').DataTable();  // Delete item  sc\_deleteDialog.openModal('deleteItem', true, 'btnYesDelete', '/Countries/DeleteCity/', false);  });  </script>  } |  |

## Método AddCity

Agregamos al controlador **CountriesController** el método **AddCity**

|  |  |
| --- | --- |
| **CountriesController** | **Comentarios** |
| public async Task<IActionResult> AddCity(int? id)  {  if (id == null)  {  return NotFound();  }  DepartmentEntity department = await \_context.Departments.FindAsync(id);  if (department == null)  {  return NotFound();  }  CityEntity model = new CityEntity { IdDepartment = department.Id };  return View(model);  }  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> AddCity(CityEntity city)  {  if (ModelState.IsValid)  {  DepartmentEntity department = await \_context.Departments  .Include(d => d.Cities)  .FirstOrDefaultAsync(c => c.Id == city.IdDepartment);  if (department == null)  {  return NotFound();  }  try  {  city.Id = 0;  department.Cities.Add(city);  \_context.Update(department);  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(DetailsDepartment)}/{department.Id}");  }  catch (DbUpdateException dbUpdateException)  {  if (dbUpdateException.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "Hay un registro con el mismo nombre.");  }  else  {  ModelState.AddModelError(string.Empty, dbUpdateException.InnerException.Message);  }  }  catch (Exception exception)  {  ModelState.AddModelError(string.Empty, exception.Message);  }  }  return View(city);  } |  |

Adicionamos la vista parcial **\_City**:

|  |  |
| --- | --- |
| **\_\_City** | **Comentarios** |
| @model GenericApp.Web.Data.Entities.CityEntity  <div class="form-group">  <label **asp-for**="Name" class="control-label"></label>  <input **asp-for**="Name" class="form-control" />  <span **asp-validation-for**="Name" class="text-danger"></span>  </div> |  |

Adicionamos la vista **AddCity**:

|  |  |
| --- | --- |
| **AddCity** | **Comentarios** |
| @model GenericApp.Web.Data.Entities.CityEntity  @{  ViewData["Title"] = "Add City";  }  <h2>Agregar Ciudad</h2>  <h4></h4>  <hr />  <div class="row">  <div class="col-md-4">  <form **asp-action**="AddCity">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <input **type**="hidden" **asp-for**="IdDepartment" />  <**partial** **name**="\_City" />  <div class="form-group">  <input type="submit" value="Grabar" class="btn btn-primary" />  <a **asp-action**="DetailsDepartment" **asp-route-id**="@Model.IdDepartment" class="btn btn-success">Regresar</a>  </div>  </form>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  } |  |

## Método EditCity

Agregamos al controlador **CountriesController** el método **EditCity**

|  |  |
| --- | --- |
| **EditCity** | **Comentarios** |
| public async Task<IActionResult> EditCity(int? id)  {  if (id == null)  {  return NotFound();  }  CityEntity city = await \_context.Cities.FindAsync(id);  if (city == null)  {  return NotFound();  }  DepartmentEntity department = await \_context.Departments.FirstOrDefaultAsync(d => d.Cities.FirstOrDefault(c => c.Id == city.Id) != null);  city.IdDepartment = department.Id;  return View(city);  }  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> EditCity(CityEntity city)  {  if (ModelState.IsValid)  {  try  {  \_context.Update(city);  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(DetailsDepartment)}/{city.IdDepartment}");  }  catch (DbUpdateException dbUpdateException)  {  if (dbUpdateException.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "Hay un registro con el mismo nombre.");  }  else  {  ModelState.AddModelError(string.Empty, dbUpdateException.InnerException.Message);  }  }  catch (Exception exception)  {  ModelState.AddModelError(string.Empty, exception.Message);  }  }  return View(city);  } |  |

Adicionamos la vista **EditCity**:

|  |  |
| --- | --- |
| **EditCity** | **Comentarios** |
| @model GenericApp.Web.Data.Entities.CityEntity  @{  ViewData["Title"] = "Edit";  }  <h2>Editar Ciudad</h2>  <h4></h4>  <hr />  <div class="row">  <div class="col-md-4">  <form **asp-action**="EditCity">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <input **type**="hidden" **asp-for**="Id" />  <input **type**="hidden" **asp-for**="IdDepartment" />  <**partial** **name**="\_City" />  <div class="form-group">  <input type="submit" value="Grabar" class="btn btn-primary" />  <a **asp-action**="DetailsDepartment" **asp-route-id**="@Model.IdDepartment" class="btn btn-success">Regresar</a>  </div>  </form>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  } |  |

## Método DeleteCity

Agregamos al controlador **CountriesController** el método **DeleteCity**

|  |  |
| --- | --- |
| **DeleteCity** | **Comentarios** |
| public async Task<IActionResult> DeleteCity(int? id)  {  if (id == null)  {  return NotFound();  }  CityEntity city = await \_context.Cities  .FirstOrDefaultAsync(m => m.Id == id);  if (city == null)  {  return NotFound();  }  DepartmentEntity department = await \_context.Departments.FirstOrDefaultAsync(d => d.Cities.FirstOrDefault(c => c.Id == city.Id) != null);  \_context.Cities.Remove(city);  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(DetailsDepartment)}/{department.Id}");  } |  |

# Seeder

## Clase SeedDb

Dentro de la carpeta **Data** creamos la Clase **SeedDb**

|  |  |
| --- | --- |
| **SeedDb** | **Comentarios** |
| using GenericApp.Web.Data;  using GenericApp.Web.Data.Entities;  using System.Collections.Generic;  using System.Linq;  using System.Threading.Tasks;  namespace GenericApp.Web.Data  {  public class SeedDb  {  private readonly DataContext \_context;  public SeedDb(DataContext context)  {  \_context = context;  }  public async Task SeedAsync()  {  await \_context.Database.EnsureCreatedAsync();  await CheckCountriesAsync();  }  private async Task CheckCountriesAsync()  {  if (!\_context.Countries.Any())  {  \_context.Countries.Add(new CountryEntity  {  Name = "Argentina",  Departments = new List<DepartmentEntity>  {  new DepartmentEntity  {  Name = "Córdoba",  Cities = new List<CityEntity>  {  new CityEntity { Name = "Córdoba" },  new CityEntity { Name = "Río Cuarto" },  new CityEntity { Name = "Villa María" }  }  },  new DepartmentEntity  {  Name = "Buenos Aires",  Cities = new List<CityEntity>  {  new CityEntity { Name = "La Plata" },  new CityEntity { Name = "Mar del Plata" },  new CityEntity { Name = "Tandil" }  }  },  new DepartmentEntity  {  Name = "Santa Fe",  Cities = new List<CityEntity>  {  new CityEntity { Name = "Santa Fe" },  new CityEntity { Name = "Rosario" },  new CityEntity { Name = "Venado Tuerto" }  }  }  },  Teams = new List<TeamEntity>  {  new TeamEntity  {  Name = "Talleres",  },  new TeamEntity  {  Name = "Belgrano",  },  new TeamEntity  {  Name = "River Plate",  },  new TeamEntity  {  Name = "Boca Juniors",  },  }  });  \_context.Countries.Add(new CountryEntity  {  Name = "USA",  Departments = new List<DepartmentEntity>  {  new DepartmentEntity  {  Name = "California",  Cities = new List<CityEntity>  {  new CityEntity { Name = "Los Angeles" },  new CityEntity { Name = "San Diego" },  new CityEntity { Name = "San Francisco" }  }  },  new DepartmentEntity  {  Name = "Illinois",  Cities = new List<CityEntity>  {  new CityEntity { Name = "Chicago" },  new CityEntity { Name = "Springfield" }  }  },  new DepartmentEntity  {  Name = "Florida",  Cities = new List<CityEntity>  {  new CityEntity { Name = "Miami" },  new CityEntity{ Name = "Orlando" }  }  }  },  Teams = new List<TeamEntity>  {  new TeamEntity  {  Name = "San Antonio Spurs",  },  new TeamEntity  {  Name = "Los Angeles Lakers",  },  new TeamEntity  {  Name = "Miami Heats",  },  new TeamEntity  {  Name = "New York Knicks",  },  }  });  };  await \_context.SaveChangesAsync();  }  }  } |  |

## Inyección de la Clase SeedDb

Modificamos el **Startup** para inyectar esta clase:

|  |  |
| --- | --- |
| **Startup** | **Comentarios** |
| public void ConfigureServices(IServiceCollection services)  {  services.Configure<CookiePolicyOptions>(options =>  {  options.CheckConsentNeeded = context => true;  options.MinimumSameSitePolicy = SameSiteMode.None;  });  services.AddDbContext<DataContext>(cfg =>  {  cfg.UseSqlServer(Configuration.GetConnectionString("DefaultConnection"));  });  services.AddTransient<SeedDb>();  services.AddMvc().SetCompatibilityVersion(CompatibilityVersion.Version\_2\_1);  } |  |

Modificamos el **Program** para llamar el seeder cada vez que inicie nuestro sitio WEB:

|  |  |
| --- | --- |
| **Program** | **Comentarios** |
| using Microsoft.AspNetCore;  using Microsoft.AspNetCore.Hosting;  using Microsoft.Extensions.DependencyInjection;  using GenericApp.Web.Data;  namespace GenericApp.Web  {  public class Program  {  public static void Main(string[] args)  {  IWebHost host = CreateWebHostBuilder(args).Build();  RunSeeding(host);  host.Run();  }  private static void RunSeeding(IWebHost host)  {  IServiceScopeFactory scopeFactory = host.Services.GetService<IServiceScopeFactory>();  using (IServiceScope scope = scopeFactory.CreateScope())  {  SeedDb seeder = scope.ServiceProvider.GetService<SeedDb>();  seeder.SeedAsync().Wait();  }  }  public static IWebHostBuilder CreateWebHostBuilder(string[] args)  {  return WebHost.CreateDefaultBuilder(args).UseStartup<Startup>();  }  }  } |  |

Borramos la base de datos con el comando:

drop-database

Corremos el proyecto y probamos.

# CRUD para Categories

## Controlador

Clic derecho en Controllers, Agregar, Clase y ponemos como nombre **CategoriesController**

|  |  |
| --- | --- |
| **CategoriesController** | **Comentarios** |
| using GenericApp.Web.Data;  using GenericApp.Web.Data.Entities;  using GenericApp.Web.Helpers;  using GenericApp.Web.Models;  using Microsoft.AspNetCore.Authorization;  using Microsoft.AspNetCore.Mvc;  using Microsoft.EntityFrameworkCore;  using System;  using System.Threading.Tasks;  //using Vereyon.Web;  namespace GenericApp.Web.Controllers  {  [Authorize(Roles = "Admin")]  public class CategoriesController : Controller  {  private readonly DataContext \_context;  private readonly IImageHelper \_imageHelper;  private readonly IConverterHelper \_converterHelper;  // private readonly IFlashMessage \_flashMessage;  public CategoriesController(DataContext context,  IImageHelper imageHelper,  IConverterHelper converterHelper)  // IFlashMessage flashMessage    {  \_context = context;  \_imageHelper = imageHelper;  \_converterHelper = converterHelper;  // this.\_flashMessage = flashMessage;  }  // GET: Categories  public async Task<IActionResult> Index()  {  return View(await \_context.Categories.ToListAsync());  }  // GET: Categories/Create  public IActionResult Create()  {  return View();  }  // POST: Categories/Create  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> Create(CategoryViewModel model)  {  if (ModelState.IsValid)  {  var path = string.Empty;  if (model.ImageFile != null)  {  path = await \_imageHelper.UploadImageAsync(model.ImageFile, "Categories");  }  var category = \_converterHelper.ToCategoryEntity(model, path, true);  \_context.Add(category);  try  {  await \_context.SaveChangesAsync();  return RedirectToAction(nameof(Index));  }  catch (Exception ex)  {  if (ex.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "Esta Categoría ya existe");  }  else  {  ModelState.AddModelError(string.Empty, ex.InnerException.Message);  }  }  }  return View(model);  }  // GET: Categories/Edit/5  public async Task<IActionResult> Edit(int? id)  {  if (id == null)  {  return NotFound();  }  CategoryEntity Category = await \_context.Categories.FindAsync(id);  if (Category == null)  {  return NotFound();  }  CategoryViewModel model = \_converterHelper.ToCategoryViewModel(Category);  return View(model);  }  // POST: Categories/Edit/5  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> Edit(CategoryViewModel model)  {  if (ModelState.IsValid)  {  if (ModelState.IsValid)  {  var path = model.ImagePath;  if (model.ImageFile != null)  {  path = await \_imageHelper.UploadImageAsync(model.ImageFile, "Categories");  }  CategoryEntity category = \_converterHelper.ToCategoryEntity(model, path, false);  \_context.Update(category);  try  {  await \_context.SaveChangesAsync();  return RedirectToAction(nameof(Index));  }  catch (Exception ex)  {  if (ex.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "Esta Categoría ya existe");  }  else  {  ModelState.AddModelError(string.Empty, ex.InnerException.Message);  }  }  }  }  return View(model);  }  // POST: Categories/Delete/5  public async Task<IActionResult> Delete(int? id)  {  if (id == null)  {  return NotFound();  }  CategoryEntity category = await \_context.Categories  .FirstOrDefaultAsync(m => m.Id == id);  if (category == null)  {  return NotFound();  }  try  {  \_context.Categories.Remove(category);  await \_context.SaveChangesAsync();  // \_flashMessage.Confirmation("La categoría fue borrada.");  }  catch  {  // \_flashMessage.Danger("No se puede borrar la categoría porque tiene registros relacionados.");  }  return RedirectToAction(nameof(Index));  }  }  } |  |

Agregamos en **Shared/\_Layout.cshtml**

<li><a **asp-area**="" **asp-controller**="Categories" **asp-action**="Index">Categorías</a></li>

## Vistas

Creamos la Vista **Index**

|  |  |
| --- | --- |
| **Index** | **Comentarios** |
| @model IEnumerable<GenericApp.Web.Data.Entities.CategoryEntity>  @{  ViewData["Title"] = "Index";  }  <h2><img src="/images/Categories/categorias.jpg" alt="Image" style="width:70;height:70px;max-height: 100%; width: auto;" />  Categorías</h2>  <flash dismissable="true" />  <p>  <a **asp-action**="Create" class="btn btn-primary">Crear Nueva Categoría</a>  </p>  <table class="table">  <thead>  <tr>  <th>  @Html.DisplayNameFor(model => model.Name)  </th>  <th>  @Html.DisplayNameFor(model => model.ImagePath)  </th>  <th></th>  </tr>  </thead>  <tbody>  @foreach (var item in Model)  {  <tr>  <td>  @Html.DisplayFor(modelItem => item.Name)  </td>  <td>  @if (!string.IsNullOrEmpty(item.ImagePath))  {  <img src="@Url.Content(item.ImagePath)" alt="Image" style="width:50px;height:50px;max-width: 100%; height: auto;" />  }  else  {  <img src="@Url.Content(item.ImageFullPath)" alt="Image" style="width:50px;height:50px;max-width: 100%; height: auto;" />  }  </td>  <td>  <a **asp-action**="Edit" **asp-route-id**="@item.Id" class="btn btn-warning"><i class="glyphicon glyphicon-pencil"></i></a>  <button data-id="@item.Id" class="btn btn-danger deleteItem" data-toggle="modal" data-target="#deleteDialog"><i class="glyphicon glyphicon-trash"></i></button>  </td>  </tr>  }  </tbody>  </table>  <!--Delete Item-->  <div class="modal fade" id="deleteDialog" tabindex="-1" role="dialog" aria-labelledby="exampleModalLabel" aria-hidden="true">  <div class="modal-dialog" role="document">  <div class="modal-content">  <div class="modal-header">  <h5 class="modal-title" id="exampleModalLabel">Borrar Registro</h5>  <button type="button" class="close" data-dismiss="modal" aria-label="Close">  <span aria-hidden="true">&times;</span>  </button>  </div>  <div class="modal-body">  <p>¿Quiere borrar esta Categoría?</p>  </div>  <div class="modal-footer">  <button type="button" class="btn btn-primary" data-dismiss="modal">Cerrar</button>  <button type="button" class="btn btn-danger" id="btnYesDelete">Borrar</button>  </div>  </div>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  <script type="text/javascript">  $(document).ready(function () {  // Delete item  var item\_to\_delete;  $('.deleteItem').click((e) => {  item\_to\_delete = e.currentTarget.dataset.id;  });  $("#btnYesDelete").click(function () {  window.location.href = '/Categories/Delete/' + item\_to\_delete;  });  });  </script>  } |  |

Creamos la vista parcial **\_Category**

|  |  |
| --- | --- |
| **\_Category** | **Comentarios** |
| @model GenericApp.Web.Models.CategoryViewModel  <div class="form-group">  <label **asp-for**="Name" class="control-label"></label>  <input **asp-for**="Name" class="form-control" />  <span **asp-validation-for**="Name" class="text-danger"></span>  </div>  <div class="form-group">  <label **asp-for**="ImageFile" class="control-label"></label>  <input **asp-for**="ImageFile" **type**="file" class="form-control" />  <span **asp-validation-for**="ImageFile" class="text-danger"></span>  </div> |  |

Creamos la vista **Create**

|  |  |
| --- | --- |
| **Create** | **Comentarios** |
| @model GenericApp.Web.Models.CategoryViewModel  @{  ViewData["Title"] = "Create";  }  <h2>  <img src="/images/Categories/addcategory.png" alt="Image" style="width:70;height:70px;max-height: 100%; width: auto;" />  Crear Nueva Categoría  </h2>  <h4></h4>  <hr />  <div class="row">  <div class="col-md-4">  <form **asp-action**="Create" enctype="multipart/form-data">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <**partial** **name**="\_Category" />  <div class="form-group">  <input type="submit" value="Crear" class="btn btn-primary" />  <a **asp-action**="Index" class="btn btn-success">Regresar</a>  </div>  </form>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  } |  |

Creamos la vista **Edit**

|  |  |
| --- | --- |
| **Edit** | **Comentarios** |
| @model GenericApp.Web.Models.CategoryViewModel  @{  ViewData["Title"] = "Edit";  }  <h2>Editar Categoría</h2>  <h4></h4>  <hr />  <div class="row">  <div class="col-md-4">  <form **asp-action**="Edit" enctype="multipart/form-data">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <input **type**="hidden" **asp-for**="Id" />  <input **type**="hidden" **asp-for**="ImagePath" />  <**partial** **name**="\_Category" />  <div class="form-group">  <input type="submit" value="Grabar" class="btn btn-primary" />  <a **asp-action**="Index" class="btn btn-success">Regresar</a>  </div>  </form>  </div>  <div class="col-md-4">  @if (!string.IsNullOrEmpty(Model.ImagePath))  {  <img src="@Url.Content(Model.ImagePath)" alt="Image" style="width:200px;height:200px;max-width: 100%; height: auto;" />  }  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  } |  |

# CRUD para Products

## Controlador

Clic derecho en Controllers, Agregar, Clase y ponemos como nombre **ProductsController**

|  |  |
| --- | --- |
| **ProductsController** | **Comentarios** |
| using Microsoft.AspNetCore.Mvc;  using Microsoft.EntityFrameworkCore;  using GenericApp.Web.Data;  using GenericApp.Web.Helpers;  using System;  using System.Collections.Generic;  using System.Linq;  using System.Threading.Tasks;  using GenericApp.Web.Data.Entities;  using GenericApp.Web.Models;  using Microsoft.AspNetCore.Authorization;  namespace GenericApp.Web.Controllers  {  [Authorize(Roles = "Admin")]  public class ProductsController : Controller  {  private readonly DataContext \_context;  private readonly IImageHelper \_imageHelper;  private readonly ICombosHelper \_combosHelper;  private readonly IConverterHelper \_converterHelper;  public ProductsController(DataContext context, IImageHelper imageHelper, ICombosHelper combosHelper, IConverterHelper converterHelper)  {  \_context = context;  \_imageHelper = imageHelper;  \_combosHelper = combosHelper;  \_converterHelper = converterHelper;  }  public async Task<IActionResult> Index()  {  return View(await \_context.Products  .Include(p => p.Category)  .Include(p => p.ProductImages)  .ToListAsync());  }  public IActionResult Create()  {  ProductViewModel model = new ProductViewModel  {  Categories = \_combosHelper.GetComboCategories(),  IsActive = true  };  return View(model);  }  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> Create(ProductViewModel model)  {  if (ModelState.IsValid)  {  var path = string.Empty;  try  {  ProductEntity product = await \_converterHelper.ToProductAsync(model, true);  if (model.ImageFile != null)  {  path = await \_imageHelper.UploadImageAsync(model.ImageFile, "Products");  product.ProductImages = new List<ProductImageEntity>  {  new ProductImageEntity { ImagePath = path }  };  }  \_context.Add(product);  await \_context.SaveChangesAsync();  return RedirectToAction(nameof(Index));  }  catch (DbUpdateException dbUpdateException)  {  if (dbUpdateException.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "Hay un producto con el mismo nombre.");  }  else  {  ModelState.AddModelError(string.Empty, dbUpdateException.InnerException.Message);  }  }  catch (Exception exception)  {  ModelState.AddModelError(string.Empty, exception.Message);  }  }  model.Categories = \_combosHelper.GetComboCategories();  return View(model);  }  public async Task<IActionResult> Edit(int? id)  {  if (id == null)  {  return NotFound();  }  ProductEntity product = await \_context.Products  .Include(p => p.Category)  .Include(p => p.ProductImages)  .FirstOrDefaultAsync(p => p.Id == id);  if (product == null)  {  return NotFound();  }  ProductViewModel model = \_converterHelper.ToProductViewModel(product);  return View(model);  }  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> Edit(ProductViewModel model)  {  var path = string.Empty;  if (ModelState.IsValid)  {  try  {  ProductEntity product = await \_converterHelper.ToProductAsync(model, false);  if (model.ImageFile != null)  {  path = await \_imageHelper.UploadImageAsync(model.ImageFile, "Products");  if (product.ProductImages == null)  {  product.ProductImages = new List<ProductImageEntity>();  }  product.ProductImages.Add(new ProductImageEntity { ImagePath = path });  }  \_context.Update(product);  await \_context.SaveChangesAsync();  return RedirectToAction(nameof(Index));  }  catch (DbUpdateException dbUpdateException)  {  if (dbUpdateException.InnerException.Message.Contains("duplicate"))  {  ModelState.AddModelError(string.Empty, "Este producto ya existe.");  }  else  {  ModelState.AddModelError(string.Empty, dbUpdateException.InnerException.Message);  }  }  catch (Exception exception)  {  ModelState.AddModelError(string.Empty, exception.Message);  }  }  model.Categories = \_combosHelper.GetComboCategories();  return View(model);  }  public async Task<IActionResult> Delete(int? id)  {  if (id == null)  {  return NotFound();  }  ProductEntity product = await \_context.Products  .Include(p => p.ProductImages)  .FirstOrDefaultAsync(p => p.Id == id);  if (product == null)  {  return NotFound();  }  try  {  \_context.Products.Remove(product);  await \_context.SaveChangesAsync();  }  catch (Exception ex)  {  ModelState.AddModelError(string.Empty, ex.Message);  }  return RedirectToAction(nameof(Index));  }  public async Task<IActionResult> Details(int? id)  {  if (id == null)  {  return NotFound();  }  ProductEntity product = await \_context.Products  .Include(c => c.Category)  .Include(c => c.ProductImages)  .FirstOrDefaultAsync(m => m.Id == id);  if (product == null)  {  return NotFound();  }  return View(product);  }  public async Task<IActionResult> AddImage(int? id)  {  if (id == null)  {  return NotFound();  }  ProductEntity product = await \_context.Products.FindAsync(id);  if (product == null)  {  return NotFound();  }  AddProductImageViewModel model = new AddProductImageViewModel { ProductId = product.Id };  return View(model);  }  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> AddImage(AddProductImageViewModel model)  {  if (ModelState.IsValid)  {  var path = string.Empty;  ProductEntity product = await \_context.Products  .Include(p => p.ProductImages)  .FirstOrDefaultAsync(p => p.Id == model.ProductId);  if (product == null)  {  return NotFound();  }  try  {  path = await \_imageHelper.UploadImageAsync(model.ImageFile, "Products");  if (product.ProductImages == null)  {  product.ProductImages = new List<ProductImageEntity>();  }  product.ProductImages.Add(new ProductImageEntity { ImagePath = path });  \_context.Update(product);  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(Details)}/{product.Id}");  }  catch (Exception exception)  {  ModelState.AddModelError(string.Empty, exception.Message);  }  }  return View(model);  }  public async Task<IActionResult> DeleteImage(int? id)  {  if (id == null)  {  return NotFound();  }  ProductImageEntity productImage = await \_context.ProductImages  .FirstOrDefaultAsync(m => m.Id == id);  if (productImage == null)  {  return NotFound();  }  ProductEntity product = await \_context.Products.FirstOrDefaultAsync(p => p.ProductImages.FirstOrDefault(pi => pi.Id == productImage.Id) != null);  \_context.ProductImages.Remove(productImage);  await \_context.SaveChangesAsync();  return RedirectToAction($"{nameof(Details)}/{product.Id}");  }  }  } |  |

Agregamos en **Shared/\_Layout.cshtml**

<li><a **asp-area**="" **asp-controller**="Products" **asp-action**="Index">Productos</a></li>

## Vistas

Creamos la Vista **Index**

|  |  |
| --- | --- |
| **Index** | **Comentarios** |
| @model IEnumerable<GenericApp.Web.Data.Entities.ProductEntity>  @{  ViewData["Title"] = "Index";  }  <h2>  <img src="/images/Products/productos.jpg" alt="Image" style="width:70;height:70px;max-height: 100%; width: auto;" />  Productos  </h2>  <link rel="stylesheet" href="https://cdn.datatables.net/1.10.19/css/jquery.dataTables.min.css" />  <br />  <p>  <a **asp-action**="Create" class="btn btn-primary"><i class="glyphicon glyphicon-plus"></i> Agregar Nuevo Producto</a>  </p>  <div class="row">  <div class="col-md-12">  <div class="panel panel-default">  <div class="panel-heading">  <h3 class="panel-title">Productos</h3>  </div>  <div class="panel-body">  <table class="table table-hover table-responsive table-striped" id="MyTable">  <thead>  <tr>  <th>  @Html.DisplayNameFor(model => model.Name)  </th>  <th>  @Html.DisplayNameFor(model => model.ImageFullPath)  </th>  <th>  @Html.DisplayNameFor(model => model.Price)  </th>  <th>  @Html.DisplayNameFor(model => model.IsActive)  </th>  <th>  Categoría  </th>  <th>  @Html.DisplayNameFor(model => model.ProductImagesNumber)  </th>  <th width="120px"></th>  </tr>  </thead>  <tbody>  @foreach (var item in Model)  {  <tr>  <td>  @Html.DisplayFor(modelItem => item.Name)  </td>  <td>  <img src="@item.ImageFullPath" style="width:70px;height:70px;max-width: 100%; height: auto;" />  </td>  <td>  @Html.DisplayFor(modelItem => item.Price)  </td>  <td>  @Html.DisplayFor(modelItem => item.IsActive)  </td>  <td>  @Html.DisplayFor(modelItem => item.Category.Name)  </td>  <td>  @Html.DisplayFor(modelItem => item.ProductImagesNumber)  </td>  <td>  <a **asp-action**="Edit" **asp-route-id**="@item.Id" class="btn btn-warning"><i class="glyphicon glyphicon-pencil"></i></a>  <a **asp-action**="Details" **asp-route-id**="@item.Id" class="btn btn-info"><i class="glyphicon glyphicon-align-justify"></i></a>  <button data-id="@item.Id" class="btn btn-danger deleteItem" data-toggle="modal" data-target="#deleteDialog"><i class="glyphicon glyphicon-trash"></i></button>  </td>  </tr>  }  </tbody>  </table>  </div>  </div>  </div>  </div>  <**partial** **name**="\_DeleteDialog" />  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  <script src="//cdn.datatables.net/1.10.19/js/jquery.dataTables.min.js"></script>  <script src="/js/deleteDialog.js"></script>  <script type="text/javascript">  $(document).ready(function () {  $('#MyTable').DataTable();  // Delete item  sc\_deleteDialog.openModal('deleteItem', true, 'btnYesDelete', '/Products/Delete/', false);  });  </script>  } |  |

Creamos la vista parcial **\_Product**

|  |  |
| --- | --- |
| **\_Product** | **Comentarios** |
| @model GenericApp.Web.Models.ProductViewModel  <div class="form-group">  <label **asp-for**="Name" class="control-label"></label>  <input **asp-for**="Name" class="form-control" />  <span **asp-validation-for**="Name" class="text-danger"></span>  </div>  <div class="form-group">  <label **asp-for**="Description" class="control-label"></label>  <textarea **asp-for**="Description" class="form-control"></textarea>  <span **asp-validation-for**="Description" class="text-danger"></span>  </div>  <div class="form-group">  <label **asp-for**="CategoryId" class="control-label"></label>  <select **asp-for**="CategoryId" **asp-items**="Model.Categories" class="form-control"></select>  <span **asp-validation-for**="CategoryId" class="text-danger"></span>  </div>  <div class="form-group">  <label **asp-for**="PriceString" class="control-label"></label>  <input **asp-for**="PriceString" class="form-control" />  <span **asp-validation-for**="PriceString" class="text-danger"></span>  </div>  <div class="form-group">  <label **asp-for**="ImageFile" class="control-label"></label>  <input **asp-for**="ImageFile" **type**="file" class="form-control" />  <span **asp-validation-for**="ImageFile" class="text-danger"></span>  </div>  <div class="form-group">  <div class="checkbox">  <label>  <input **asp-for**="IsActive" /> @Html.DisplayNameFor(model => model.IsActive)  </label>  </div>  </div> |  |

Creamos la vista **Create**

|  |  |
| --- | --- |
| **Create** | **Comentarios** |
| @model GenericApp.Web.Models.ProductViewModel  @{  ViewData["Title"] = "Create";  }  <h2>  <img src="/images/Products/addproduct.png" alt="Image" style="width:70;height:70px;max-height: 100%; width: auto;" />  Crear Producto  </h2>  <h4></h4>  <hr />  <div class="row">  <div class="col-md-4">  <form **asp-action**="Create" enctype="multipart/form-data">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <**partial** **name**="\_Product" />  <div class="form-group">  <input type="submit" value="Crear" class="btn btn-primary" />  <a **asp-action**="Index" class="btn btn-success">Regresar</a>  </div>  </form>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  } |  |

Creamos la vista **Edit**

|  |  |
| --- | --- |
| **Edit** | **Comentarios** |
| @model GenericApp.Web.Models.ProductViewModel  @{  ViewData["Title"] = "Edit";  }  <h2>Editar Producto</h2>  <h4></h4>  <hr />  <div class="row">  <div class="col-md-4">  <form **asp-action**="Edit" enctype="multipart/form-data">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <input **type**="hidden" **asp-for**="Id" />  <**partial** **name**="\_Product" />  <div class="form-group">  <input type="submit" value="Grabar" class="btn btn-primary" />  <a **asp-action**="Index" class="btn btn-success">Regresar</a>  </div>  </form>  </div>  <div class="col-md-4">  <img src="@Model.ImageFullPath" style="width:200px;height:200px;max-width: 100%; height: auto;" />  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  } |  |

Creamos la vista **Details**

|  |  |
| --- | --- |
| **Details** | **Comentarios** |
| @model GenericApp.Web.Data.Entities.ProductEntity  @{  ViewData["Title"] = "Details";  }  <link rel="stylesheet" href="https://cdn.datatables.net/1.10.19/css/jquery.dataTables.min.css" />  <h2>Detalle Producto</h2>  <div>  <h4></h4>  <hr />  <dl class="dl-horizontal">  <dt>  @Html.DisplayNameFor(model => model.Name)  </dt>  <dd>  @Html.DisplayFor(model => model.Name)  </dd>  <dt>  @Html.DisplayNameFor(model => model.Description)  </dt>  <dd>  @Html.DisplayFor(model => model.Description)  </dd>  <dt>  Categoría  </dt>  <dd>  @Html.DisplayFor(model => model.Category.Name)  </dd>  <dt>  @Html.DisplayNameFor(model => model.Price)  </dt>  <dd>  @Html.DisplayFor(model => model.Price)  </dd>  <dt>  @Html.DisplayNameFor(model => model.IsActive)  </dt>  <dd>  @Html.DisplayFor(model => model.IsActive)  </dd>  <dt>  @Html.DisplayNameFor(model => model.ProductImagesNumber)  </dt>  <dd>  @Html.DisplayFor(model => model.ProductImagesNumber)  </dd>  </dl>  </div>  <div>  <a **asp-action**="AddImage" **asp-route-id**="@Model.Id" class="btn btn-primary"><i class="glyphicon glyphicon-plus"></i> Imagen</a>  <a **asp-action**="Edit" **asp-route-id**="@Model.Id" class="btn btn-warning">Editar</a>  <a **asp-action**="Index" class="btn btn-success">Regresar</a>  </div>  <br />  <div class="row">  <div class="col-md-12">  <div class="panel panel-default">  <div class="panel-heading">  <h3 class="panel-title">Imágenes del Producto</h3>  </div>  <div class="panel-body">  <table class="table table-hover table-responsive table-striped" id="MyTableImages">  <thead>  <tr>  <th>  @Html.DisplayNameFor(model => model.ProductImages.FirstOrDefault().ImageFullPath)  </th>  <th></th>  </tr>  </thead>  <tbody>  @foreach (var item in Model.ProductImages)  {  <tr>  <td>  <img src="@item.ImageFullPath" style="width:70px;height:70px;max-width: 100%; height: auto;" />  </td>  <td>  <button data-id="@item.Id" class="btn btn-danger deleteItem" data-toggle="modal" data-target="#deleteDialog"><i class="glyphicon glyphicon-trash"></i></button>  </td>  </tr>  }  </tbody>  </table>  </div>  </div>  </div>  </div>  <**partial** **name**="\_DeleteDialog" />  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  <script src="//cdn.datatables.net/1.10.19/js/jquery.dataTables.min.js"></script>  <script src="/js/deleteDialog.js"></script>  <script type="text/javascript">  $(document).ready(function () {  $('#MyTableImages').DataTable();  $('#MyTableQualifications').DataTable();  // Delete item  sc\_deleteDialog.openModal('deleteItem', true, 'btnYesDelete', '/Products/DeleteImage/', false);  });  </script>  } |  |

Creamos la vista **AddImage**

|  |  |
| --- | --- |
| **AddImage** | **Comentarios** |
| @model GenericApp.Web.Models.AddProductImageViewModel  @{  ViewData["Title"] = "Add Image";  }  <h2>Agregar Imagen</h2>  <h4></h4>  <hr />  <div class="row">  <div class="col-md-4">  <form **asp-action**="AddImage" enctype="multipart/form-data">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <input **type**="hidden" **asp-for**="ProductId" />  <div class="form-group">  <label **asp-for**="ImageFile" class="control-label"></label>  <input **asp-for**="ImageFile" **type**="file" class="form-control" />  <span **asp-validation-for**="ImageFile" class="text-danger"></span>  </div>  <div class="form-group">  <input type="submit" value="Grabar" class="btn btn-primary" />  <a **asp-action**="Details" **asp-route-id**="@Model.ProductId" class="btn btn-success">Regresar</a>  </div>  </form>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  } |  |

# Adición de usuarios y roles

## Tipos de Usuario

Vamos a tener dos tipos de usuarios; administradores y usuarios.

Creamos una enumeración para diferenciarlos. Creamos la carpeta **Enums** en el proyecto **Common** y dentro de esta carpeta la enumeración **UserType**:

|  |  |
| --- | --- |
| **UserType** | **Comentarios** |
| namespace GenericApp.Common.Enums  {  public enum UserType  {  Admin,  User  }  } |  |

## Clase User

En la Carpeta **Data/Entities** creamos la Clase **UserEntity**

|  |  |
| --- | --- |
| **User** | **Comentarios** |
| using GenericApp.Common.Enums;  using Microsoft.AspNetCore.Identity;  using System.ComponentModel.DataAnnotations;  namespace GenericApp.Web.Data.Entities  {  public class User : IdentityUser  {  [MaxLength(20, ErrorMessage = "El campo {0} debe contener menos de {1} caracteres")]  [Required(ErrorMessage = "El campo {0} es requerido")]  [Display(Name = "Documento")]  public string Document { get; set; }  [Display(Name = "Nombre")]  [MaxLength(50, ErrorMessage = "El campo {0} debe contener menos de {1} caracteres")]  [Required(ErrorMessage = "El campo {0} es requerido")]  public string FirstName { get; set; }  [Display(Name = "Apellido")]  [MaxLength(50, ErrorMessage = "El campo {0} debe contener menos de {1} caracteres")]  [Required(ErrorMessage = "El campo {0} es requerido")]  public string LastName { get; set; }  [Display(Name = "Dirección")]  [MaxLength(100, ErrorMessage = "El campo {0} debe contener menos de {1} caracteres")]  public string Address { get; set; }  [Display(Name = "Foto")]  public string PicturePath { get; set; }  [Display(Name = "Foto")]  public string PictureFullPath => string.IsNullOrEmpty(PicturePath)  ? $"http://keypress.serveftp.net:88/GenericAppApi/images/Users/nouser.png"  : $"http://keypress.serveftp.net:88/GenericAppApi{PicturePath.Substring(1)}";  [Display(Name = "Tipo de Usuario")]  public UserType UserType { get; set; }  [Display(Name = "Ciudad")]  public CityEntity City { get; set; }  [Display(Name = "Hincha de")]  public TeamEntity FavoriteTeam { get; set; }  [Display(Name = "Usuario")]  public string FullName => $"{FirstName} {LastName}";  [Display(Name = "Usuario")]  public string FullNameWithDocument => $"{FirstName} {LastName} - {Document}";  }  } |  |

## Modificar el DataContext

Modificamos el **DataContext**

|  |  |
| --- | --- |
| **DataContext** | **Comentarios** |
| public class DataContext : IdentityDbContext<User>  #region Constructor  public DataContext(DbContextOptions<DataContext> options) : base(options)  {  }  #endregion  … |  |

## ViewModels para manejar Usuarios

En la Carpeta **Models** creamos la Clase **EditUserViewModel**

|  |  |
| --- | --- |
| **EditUserViewModel** | **Comentarios** |
| using Microsoft.AspNetCore.Http;  using Microsoft.AspNetCore.Mvc.Rendering;  using System.Collections.Generic;  using System.ComponentModel.DataAnnotations;  namespace GenericApp.Web.Models  {  public class EditUserViewModel  {  public string Id { get; set; }  [Display(Name = "Documento")]  [MaxLength(20, ErrorMessage = "El campo {0} no puede tener más de {1} caracteres.")]  [Required(ErrorMessage = "El campo {0} es requerido.")]  public string Document { get; set; }  [Display(Name = "Nombre")]  [MaxLength(50, ErrorMessage = "El campo {0} no puede tener más de {1} caracteres.")]  [Required(ErrorMessage = "El campo {0} es requerido.")]  public string FirstName { get; set; }  [Display(Name = "Apellido")]  [MaxLength(50, ErrorMessage = "El campo {0} no puede tener más de {1} caracteres.")]  [Required(ErrorMessage = "El campo {0} es requerido.")]  public string LastName { get; set; }  [Display(Name = "Dirección")]  [MaxLength(100, ErrorMessage = "El campo {0} no puede tener más de {1} caracteres.")]  public string Address { get; set; }  [Display(Name = "Teléfono")]  [MaxLength(50, ErrorMessage = "El campo {0} no puede tener más de {1} caracteres.")]  public string PhoneNumber { get; set; }  [Display(Name = "Foto")]  public string PicturePath { get; set; }  [Display(Name = "Foto")]  public string PictureFullPath => string.IsNullOrEmpty(PicturePath)  ? $"http://keypress.serveftp.net:88/GenericAppApi/images/Users/nouser.png"  : $"http://keypress.serveftp.net:88/GenericAppApi{PicturePath.Substring(1)}";  [Display(Name = "Image")]  public IFormFile ImageFile { get; set; }  [Required(ErrorMessage = "El campo {0} es requerido.")]  [Display(Name = "País")]  [Range(1, int.MaxValue, ErrorMessage = "Debe seleccionar un país")]  public int CountryId { get; set; }  public IEnumerable<SelectListItem> Countries { get; set; }  [Required(ErrorMessage = "El campo {0} es requerido.")]  [Display(Name = "Provincia")]  [Range(1, int.MaxValue, ErrorMessage = "Debe seleccionar una provincia")]  public int DepartmentId { get; set; }  public IEnumerable<SelectListItem> Departments { get; set; }  [Required(ErrorMessage = "El campo {0} es requerido.")]  [Display(Name = "País")]  [Range(1, int.MaxValue, ErrorMessage = "Debe seleccionar un país")]  public int CountryTeamId { get; set; }  public IEnumerable<SelectListItem> Teams { get; set; }  [Required(ErrorMessage = "El campo {0} es requerido.")]  [Display(Name = "Ciudad")]  [Range(1, int.MaxValue, ErrorMessage = "Debe seleccionar una ciudad")]  public int CityId { get; set; }  public IEnumerable<SelectListItem> Cities { get; set; }  [Required(ErrorMessage = "El campo {0} es requerido.")]  [Display(Name = "Equipo")]  [Range(1, int.MaxValue, ErrorMessage = "Debe seleccionar un equipo")]  public int TeamId { get; set; }  [Display(Name = "Tipo Usuario")]  Public string UserType { get; set; }  public IEnumerable<SelectListItem> UserTypes { get; set; }  }  } |  |

En la Carpeta **Models** creamos la Clase **AddUserViewModel**

|  |  |
| --- | --- |
| **AddUserViewModel** | **Comentarios** |
| using System.ComponentModel.DataAnnotations;  namespace GenericApp.Web.Models  {  public class AddUserViewModel : EditUserViewModel  {  [Display(Name = "Email")]  [Required(ErrorMessage = "El campo {0} es requerido.")]  [MaxLength(100, ErrorMessage = "El campo {0} no puede tener más de {1} caracteres.")]  [EmailAddress]  public string Username { get; set; }  [Display(Name = "Password")]  [Required(ErrorMessage = "El campo {0} es requerido.")]  [DataType(DataType.Password)]  [StringLength(20, MinimumLength = 6, ErrorMessage = "El campo {0} debe tener entre {2} y {1} caracteres.")]  public string Password { get; set; }  [Display(Name = "Confirmación de Password")]  [Required(ErrorMessage = "El campo {0} es requerido.")]  [DataType(DataType.Password)]  [StringLength(20, MinimumLength = 6, ErrorMessage = "El campo {0} debe tener entre {2} y {1} caracteres.")]  [Compare("Password")]  public string PasswordConfirm { get; set; }  }  } |  |

En la Carpeta **Models** creamos la Clase **LoginViewModel**

|  |  |
| --- | --- |
| **LoginViewModel** | **Comentarios** |
| using System.ComponentModel.DataAnnotations;  namespace GenericApp.Web.Models  {  public class LoginViewModel  {  [Required(ErrorMessage = "El campo {0} es requerido.")]  [EmailAddress]  public string Username { get; set; }  [Required(ErrorMessage = "El campo {0} es requerido.")]  [MinLength(6, ErrorMessage = "El campo {0} debe tener al menos {1} caracteres.")]  public string Password { get; set; }  public bool RememberMe { get; set; }  }  } |  |

En la Carpeta **Models** creamos la Clase **ChangePasswordViewModel**

|  |  |
| --- | --- |
| **ChangePasswordViewModel** | **Comentarios** |
| using System.ComponentModel.DataAnnotations;  namespace GenericApp.Web.Models  {  public class ChangePasswordViewModel  {  [Display(Name = "Password actual")]  [Required(ErrorMessage = "El campo {0} es requerido.")]  [DataType(DataType.Password)]  [StringLength(20, MinimumLength = 6, ErrorMessage = "El campo {0} debe tener entre {2} y {1} caracteres.")]  public string OldPassword { get; set; }  [Display(Name = "Nuevo password")]  [Required(ErrorMessage = "El campo {0} es requerido.")]  [DataType(DataType.Password)]  [StringLength(20, MinimumLength = 6, ErrorMessage = "El campo {0} debe tener entre {2} y {1} caracteres.")]  public string NewPassword { get; set; }  [Display(Name = "Confirmar Password")]  [Required(ErrorMessage = "El campo {0} es requerido.")]  [DataType(DataType.Password)]  [StringLength(20, MinimumLength = 6, ErrorMessage = "El campo {0} debe tener entre {2} y {1} caracteres.")]  [Compare("NewPassword")]  public string Confirm { get; set; }  }  } |  |

En la Carpeta **Models** creamos la Clase **RecoverPasswordViewModel**

|  |  |
| --- | --- |
| **RecoverPasswordViewModel** | **Comentarios** |
| using System.ComponentModel.DataAnnotations;  namespace GenericApp.Web.Models  {  public class RecoverPasswordViewModel  {  [Required(ErrorMessage = "El campo {0} es requerido")]  [EmailAddress]  public string Email { get; set; }  }  } |  |

En la Carpeta **Models** creamos la Clase **ResetPasswordViewModel**

|  |  |
| --- | --- |
| **ResetPasswordViewModel** | **Comentarios** |
| using System.ComponentModel.DataAnnotations;  namespace GenericApp.Web.Models  {  public class ResetPasswordViewModel  {  [Required(ErrorMessage = "El campo {0} es requerido")]  [EmailAddress]  public string UserName { get; set; }  [Required(ErrorMessage = "El campo {0} es requerido")]  [StringLength(20, MinimumLength = 6, ErrorMessage = "El campo {0} debe tener entre {2} y {1} caracteres.")]  [DataType(DataType.Password)]  public string Password { get; set; }  [Required(ErrorMessage = "El campo {0} es requerido")]  [StringLength(20, MinimumLength = 6, ErrorMessage = "El campo {0} debe tener entre {2} y {1} caracteres.")]  [DataType(DataType.Password)]  [Compare("Password")]  public string ConfirmPassword { get; set; }  [Required]  public string Token { get; set; }  }  } |  |

## UserHelper

En la carpeta **Helpers** creamos la interfaz **IUserHelper**

|  |  |
| --- | --- |
| **IUserHelper** | **Comentarios** |
| using System;  using System.Threading.Tasks;  using Microsoft.AspNetCore.Identity;  using GenericApp.Web.Data.Entities;  using GenericApp.Web.Models;  using GenericApp.Common.Enums;  namespace GenericApp.Web.Helpers  {  public interface IUserHelper  {  Task<User> GetUserAsync(string email);  Task<User> GetUserAsync(Guid userId);  Task<IdentityResult> AddUserAsync(User user, string password);  Task<User> AddUserAsync(AddUserViewModel model, string path, UserType userType);  Task CheckRoleAsync(string roleName);  Task AddUserToRoleAsync(User user, string roleName);  Task<bool> IsUserInRoleAsync(User user, string roleName);  Task<SignInResult> LoginAsync(LoginViewModel model);  Task LogoutAsync();  Task<bool> DeleteUserAsync(string email);  Task<IdentityResult> UpdateUserAsync(User user);  Task<SignInResult> ValidatePasswordAsync(User user, string password);  Task<IdentityResult> ChangePasswordAsync(User user, string oldPassword, string newPassword);  Task<string> GenerateEmailConfirmationTokenAsync(User user);  Task<IdentityResult> ConfirmEmailAsync(User user, string token);  Task<User> GetUserByIdAsync(string userId);  Task<string> GeneratePasswordResetTokenAsync(User user);  Task<IdentityResult> ResetPasswordAsync(User user, string token, string password);  }  } |  |

Creamos la implementación **UserHelper**

|  |  |
| --- | --- |
| **UserHelper** | **Comentarios** |
| using Microsoft.AspNetCore.Identity;  using Microsoft.EntityFrameworkCore;  using GenericApp.Common.Enums;  using GenericApp.Web.Data;  using GenericApp.Web.Data.Entities;  using GenericApp.Web.Models;  using System;  using System.Threading.Tasks;  namespace GenericApp.Web.Helpers  {  public class UserHelper : IUserHelper  {  private readonly UserManager<User> \_userManager;  private readonly RoleManager<IdentityRole> \_roleManager;  private readonly SignInManager<User> \_signInManager;  private readonly DataContext \_context;  public UserHelper(  UserManager<User> userManager,  RoleManager<IdentityRole> roleManager,  SignInManager<User> signInManager,  DataContext context)  {  \_userManager = userManager;  \_roleManager = roleManager;  \_signInManager = signInManager;  \_context = context;  }  public async Task<IdentityResult> AddUserAsync(User user, string password)  {  return await \_userManager.CreateAsync(user, password);  }  public async Task<User> AddUserAsync(AddUserViewModel model, string path, UserType userType)  {  User user = new User  {  Address = model.Address,  Document = model.Document,  Email = model.Username,  FirstName = model.FirstName,  LastName = model.LastName,  PicturePath= path,  PhoneNumber = model.PhoneNumber,  UserName = model.Username,  City = await \_context.Cities.FindAsync(model.CityId),  FavoriteTeam = await \_context.Teams.FindAsync(model.TeamId),  UserType=userType,  };  IdentityResult result = await \_userManager.CreateAsync(user, model.Password);  if (result != IdentityResult.Success)  {  return null;  }  User newUser = await GetUserAsync(model.Username);  await AddUserToRoleAsync(newUser, user.UserType.ToString());  return newUser;  }  public async Task AddUserToRoleAsync(User user, string roleName)  {  await \_userManager.AddToRoleAsync(user, roleName);  }  public async Task CheckRoleAsync(string roleName)  {  var roleExists = await \_roleManager.RoleExistsAsync(roleName);  if (!roleExists)  {  await \_roleManager.CreateAsync(new IdentityRole  {  Name = roleName  });  }  }  public async Task<User> GetUserAsync(string email)  {  return await \_context.Users  .Include(u => u.FavoriteTeam)  .ThenInclude(l => l.Country)  .Include(c => c.City)  .ThenInclude(d => d.Department)  .ThenInclude(p => p.Country)  .FirstOrDefaultAsync(u => u.Email == email);  }  public async Task<User> GetUserAsync(Guid userId)  {  return await \_context.Users  .Include(u => u.FavoriteTeam)  .ThenInclude(l => l.Country)  .Include(c => c.City)  .ThenInclude(d => d.Department)  .ThenInclude(p => p.Country)  .FirstOrDefaultAsync(u => u.Id == userId.ToString());  }  public async Task<bool> IsUserInRoleAsync(User user, string roleName)  {  return await \_userManager.IsInRoleAsync(user, roleName);  }  public async Task<SignInResult> LoginAsync(LoginViewModel model)  {  return await \_signInManager.PasswordSignInAsync(  model.Username,  model.Password,  model.RememberMe,  false);  }  public async Task LogoutAsync()  {  await \_signInManager.SignOutAsync();  }  public async Task<bool> DeleteUserAsync(string email)  {  var user = await GetUserAsync(email);  if (user == null)  {  return true;  }  var response = await \_userManager.DeleteAsync(user);  return response.Succeeded;  }  public async Task<IdentityResult> UpdateUserAsync(User user)  {  return await \_userManager.UpdateAsync(user);  }  public async Task<SignInResult> ValidatePasswordAsync(User user, string password)  {  return await \_signInManager.CheckPasswordSignInAsync(  user,  password,  false);  }  public async Task<IdentityResult> ChangePasswordAsync(User user, string oldPassword, string newPassword)  {  return await \_userManager.ChangePasswordAsync(user, oldPassword, newPassword);  }  public async Task<IdentityResult> ConfirmEmailAsync(User user, string token)  {  return await \_userManager.ConfirmEmailAsync(user, token);  }  public async Task<string> GenerateEmailConfirmationTokenAsync(User user)  {  return await \_userManager.GenerateEmailConfirmationTokenAsync(user);  }  public async Task<User> GetUserByIdAsync(string userId)  {  return await \_userManager.FindByIdAsync(userId);  }  public async Task<string> GeneratePasswordResetTokenAsync(User user)  {  return await \_userManager.GeneratePasswordResetTokenAsync(user);  }  public async Task<IdentityResult> ResetPasswordAsync(User user, string token, string password)  {  return await \_userManager.ResetPasswordAsync(user, token, password);  }  }  } |  |

## Modificamos el método ConfigureServices del Startup:

Modificamos el método **ConfigureServices** del **Startup**:

|  |  |
| --- | --- |
| **Startup** | **Comentarios** |
| public void ConfigureServices(IServiceCollection services)  {  services.Configure<CookiePolicyOptions>(options =>  {  options.CheckConsentNeeded = context => true;  options.MinimumSameSitePolicy = SameSiteMode.None;  });  services.AddIdentity<User, IdentityRole>(cfg =>  {  cfg.User.RequireUniqueEmail = true;  cfg.Password.RequireDigit = false;  cfg.Password.RequiredUniqueChars = 0;  cfg.Password.RequireLowercase = false;  cfg.Password.RequireNonAlphanumeric = false;  cfg.Password.RequireUppercase = false;  }).AddEntityFrameworkStores<DataContext>();  services.AddDbContext<DataContext>(cfg =>  {  cfg.UseSqlServer(Configuration.GetConnectionString("DefaultConnection"));  });    services.AddTransient<SeedDb>();  services.AddScoped<IImageHelper, ImageHelper>();  services.AddScoped<IConverterHelper, ConverterHelper>();  services.AddScoped<ICombosHelper, CombosHelper>();  services.AddScoped<IUserHelper, UserHelper>();  services.AddMvc().SetCompatibilityVersion(CompatibilityVersion.Version\_2\_1);  }  public void Configure(IApplicationBuilder app, IHostingEnvironment env)  {  if (env.IsDevelopment())  {  app.UseDeveloperExceptionPage();  }  else  {  app.UseExceptionHandler("/Home/Error");  app.UseHsts();  }  app.UseHttpsRedirection();  app.UseStaticFiles();  app.UseAuthentication();  app.UseCookiePolicy();  app.UseMvc(routes =>  {  routes.MapRoute(  name: "default",  template: "{controller=Home}/{action=Index}/{id?}");  });  } | Acá se establecen los requisitos para el password |

## Modificación del SeedDb

Agregamos en la Clase **SeedDb**

|  |  |
| --- | --- |
| **SeedDb** | **Comentarios** |
| using GenericApp.Common.Enums;  using GenericApp.Web.Data.Entities;  using GenericApp.Web.Helpers;  using System.Collections.Generic;  using System.Linq;  using System.Threading.Tasks;  namespace GenericApp.Web.Data  {  public class SeedDb  {  private readonly DataContext \_context;  private readonly IUserHelper \_userHelper;  public SeedDb(DataContext context, IUserHelper userHelper)  {  \_context = context;  \_userHelper = userHelper;  }  public async Task SeedAsync()  {  await \_context.Database.EnsureCreatedAsync();  await CheckCountriesAsync();  await CheckRolesAsync();  await CheckUserAsync("17157729", "Luis", "Núñez", "luisalbertonu@gmail.com", "156 814 963", "Espora 2052", UserType.Admin);  }  private async Task CheckRolesAsync()  {  await \_userHelper.CheckRoleAsync(UserType.Admin.ToString());  await \_userHelper.CheckRoleAsync(UserType.User.ToString());  }  private async Task<User> CheckUserAsync(  string document,  string firstName,  string lastName,  string email,  string phone,  string address,  UserType userType)  {  User user = await \_userHelper.GetUserAsync(email);  if (user == null)  {  user = new User  {  FirstName = firstName,  LastName = lastName,  Email = email,  UserName = email,  PhoneNumber = phone,  Address = address,  Document = document,  City = \_context.Cities.FirstOrDefault(),  FavoriteTeam = \_context.Teams.FirstOrDefault(),  UserType = userType  };  await \_userHelper.AddUserAsync(user, "123456");  await \_userHelper.AddUserToRoleAsync(user, userType.ToString());  string token = await \_userHelper.GenerateEmailConfirmationTokenAsync(user);  await \_userHelper.ConfirmEmailAsync(user, token);  }  return user;  }  private async Task CheckCountriesAsync()  ……………… | Inyectamos UserHelper |

Borramos la BD y la creamos de nuevo:

PM> drop-database

## Confirmar Registro por Email

Agregamos en el **Startup.cs**

|  |  |
| --- | --- |
| **Startup.cs** | **Comentarios** |
| services.AddIdentity<User, IdentityRole>(cfg =>  {  cfg.Tokens.AuthenticatorTokenProvider = TokenOptions.DefaultAuthenticatorProvider;  cfg.SignIn.RequireConfirmedEmail = true;  cfg.User.RequireUniqueEmail = true;  cfg.Password.RequireDigit = false;  cfg.Password.RequiredUniqueChars = 0;  cfg.Password.RequireLowercase = false;  cfg.Password.RequireNonAlphanumeric = false;  cfg.Password.RequireUppercase = false;  })  .AddDefaultTokenProviders()  .AddEntityFrameworkStores<DataContext>(); |  |

Agregar el nuget “**Mailkit**” al proyecto Web

# Implementación de Login/Logout

## AccountController

Creamos el Controlador **AccountController**

|  |  |
| --- | --- |
| **AccountController** | **Comentarios** |
| using Microsoft.AspNetCore.Authorization;  using Microsoft.AspNetCore.Identity;  using Microsoft.AspNetCore.Mvc;  using Microsoft.EntityFrameworkCore;  using GenericApp.Common.Enums;  using GenericApp.Common.Responses;  using GenericApp.Web.Data;  using GenericApp.Web.Data.Entities;  using GenericApp.Web.Helpers;  using GenericApp.Web.Models;  using System;  using System.Linq;  using System.Threading.Tasks;  namespace GenericApp.Web.Controllers  {  public class AccountController : Controller  {  private readonly DataContext \_context;  private readonly IUserHelper \_userHelper;  private readonly ICombosHelper \_combosHelper;  private readonly IImageHelper \_imageHelper;  private readonly IMailHelper \_mailHelper;  public AccountController(  DataContext context,  IUserHelper userHelper,  ICombosHelper combosHelper,  IImageHelper imageHelper,  IMailHelper mailHelper)  {  \_context = context;  \_userHelper = userHelper;  \_combosHelper = combosHelper;  \_imageHelper = imageHelper;  \_mailHelper = mailHelper;  }  [Authorize(Roles = "Admin")]  public async Task<IActionResult> Index()  {  return View(await \_context.Users  .Include(u => u.City)  .ToListAsync());  }  [Authorize(Roles = "Admin")]  [HttpGet]  public IActionResult Create()  {  AddUserViewModel model = new AddUserViewModel  {  Countries = \_combosHelper.GetComboCountries(),  Departments = \_combosHelper.GetComboDepartments(0),  Cities = \_combosHelper.GetComboCities(0),  Teams = \_combosHelper.GetComboTeams(0),  };  return View(model);  }  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> Create(AddUserViewModel model)  {  if (ModelState.IsValid)  {  var imagePath = string.Empty;  if (model.ImageFile != null)  {  imagePath = await \_imageHelper.UploadImageAsync(model.ImageFile, "users");  }  User user = await \_userHelper.AddUserAsync(model, imagePath, UserType.Admin);  if (user == null)  {  ModelState.AddModelError(string.Empty, "Este mail ya está en uso.");  model.Countries = \_combosHelper.GetComboCountries();  model.Departments = \_combosHelper.GetComboDepartments(model.CountryId);  model.Cities = \_combosHelper.GetComboCities(model.DepartmentId);  return View(model);  }  string myToken = await \_userHelper.GenerateEmailConfirmationTokenAsync(user);  string tokenLink = Url.Action("ConfirmEmail", "Account", new  {  userid = user.Id,  token = myToken  }, protocol: HttpContext.Request.Scheme);  Response response = \_mailHelper.SendMail(model.Username, "Confirmación de Email", $"<h1>Confirmación de Email</h1>" +  $"Para habilitar el usuario, " +  $"por favor haga clic en este link: </br></br><a href = \"{tokenLink}\">Confirmación de Email</a>");  if (response.IsSuccess)  {  ViewBag.Message = "Las instrucciones para habilitar su usuario han sido enviadas a su email.";  return View(model);  }  ModelState.AddModelError(string.Empty, response.Message);  }  model.Countries = \_combosHelper.GetComboCountries();  model.Departments = \_combosHelper.GetComboDepartments(model.CountryId);  model.Cities = \_combosHelper.GetComboCities(model.DepartmentId);  return View(model);  }  public IActionResult Login()  {  if (User.Identity.IsAuthenticated)  {  return RedirectToAction("Index", "Home");  }  return View(new LoginViewModel());  }  [HttpPost]  public async Task<IActionResult> Login(LoginViewModel model)  {  if (ModelState.IsValid)  {  Microsoft.AspNetCore.Identity.SignInResult result = await \_userHelper.LoginAsync(model);  if (result.Succeeded)  {  if (Request.Query.Keys.Contains("ReturnUrl"))  {  return Redirect(Request.Query["ReturnUrl"].First());  }  return RedirectToAction("Index", "Home");  }  ModelState.AddModelError(string.Empty, "Email o password incorrecto.");  }  return View(model);  }  public async Task<IActionResult> Logout()  {  await \_userHelper.LogoutAsync();  return RedirectToAction("Index", "Home");  }  public IActionResult NotAuthorized()  {  return View();  }  public IActionResult Register()  {  AddUserViewModel model = new AddUserViewModel  {  Countries = \_combosHelper.GetComboCountries(),  Departments = \_combosHelper.GetComboDepartments(0),  Cities = \_combosHelper.GetComboCities(0),  Teams = \_combosHelper.GetComboTeams(0),  };  return View(model);  }  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> Register(AddUserViewModel model)  {  if (ModelState.IsValid)  {  var imagePath = string.Empty;  if (model.ImageFile != null)  {  imagePath = await \_imageHelper.UploadImageAsync(model.ImageFile, "Users");  }  User user = await \_userHelper.AddUserAsync(model, imagePath, UserType.User);  if (user == null)  {  ModelState.AddModelError(string.Empty, "Este mail ya está en uso.");  model.Countries = \_combosHelper.GetComboCountries();  model.Departments = \_combosHelper.GetComboDepartments(model.CountryId);  model.Cities = \_combosHelper.GetComboCities(model.DepartmentId);  return View(model);  }  string myToken = await \_userHelper.GenerateEmailConfirmationTokenAsync(user);  string tokenLink = Url.Action("ConfirmEmail", "Account", new  {  userid = user.Id,  token = myToken  }, protocol: HttpContext.Request.Scheme);  \_mailHelper.SendMail(model.Username, "Confirmación de Email", $"<h1>Confirmación de Email</h1>" +  $"Para habilitar el usuario, " +  $"por favor haga clic en este link: </br></br><a href = \"{tokenLink}\">Confirmación de Email</a>");  ViewBag.Message = "Las instrucciones para habilitar su usuario han sido enviadas a su email.";  return View(model);  }  model.Countries = \_combosHelper.GetComboCountries();  model.Departments = \_combosHelper.GetComboDepartments(model.CountryId);  model.Cities = \_combosHelper.GetComboCities(model.DepartmentId);  return View(model);  }  public JsonResult GetDepartments(int countryId)  {  CountryEntity country = \_context.Countries  .Include(c => c.Departments)  .FirstOrDefault(c => c.Id == countryId);  if (country == null)  {  return null;  }  return Json(country.Departments.OrderBy(d => d.Name));  }  public JsonResult GetTeams(int countryId)  {  CountryEntity country = \_context.Countries  .Include(c => c.Teams)  .FirstOrDefault(c => c.Id == countryId);  if (country == null)  {  return null;  }  return Json(country.Teams.OrderBy(d => d.Name));  }  public JsonResult GetCities(int departmentId)  {  DepartmentEntity department = \_context.Departments  .Include(d => d.Cities)  .FirstOrDefault(d => d.Id == departmentId);  if (department == null)  {  return null;  }  return Json(department.Cities.OrderBy(c => c.Name));  }  public async Task<IActionResult> ChangeUser()  {  User user = await \_userHelper.GetUserAsync(User.Identity.Name);  if (user == null)  {  return NotFound();  }  DepartmentEntity department = await \_context.Departments.FirstOrDefaultAsync(d => d.Cities.FirstOrDefault(c => c.Id == user.City.Id) != null);  if (department == null)  {  department = await \_context.Departments.FirstOrDefaultAsync();  }  TeamEntity team = await \_context.Teams.FirstOrDefaultAsync(c => c.Id == user.FavoriteTeam.Id);  if (team == null)  {  team = await \_context.Teams.FirstOrDefaultAsync();  }  CountryEntity country = await \_context.Countries.FirstOrDefaultAsync(c => c.Departments.FirstOrDefault(d => d.Id == department.Id) != null);  if (country == null)  {  country = await \_context.Countries.FirstOrDefaultAsync();  }  CountryEntity country2 = await \_context.Countries.FirstOrDefaultAsync(c => c.Teams.FirstOrDefault(d => d.Id == team.Id) != null);  if (country2 == null)  {  country2 = await \_context.Countries.FirstOrDefaultAsync();  }  EditUserViewModel model = new EditUserViewModel  {  Address = user.Address,  FirstName = user.FirstName,  LastName = user.LastName,  PhoneNumber = user.PhoneNumber,  PicturePath = user.PicturePath,  Cities = \_combosHelper.GetComboCities(department.Id),  CityId = user.City.Id,  Countries = \_combosHelper.GetComboCountries(),  CountryId = country.Id,  CountryTeamId= country2.Id,  DepartmentId = department.Id,  Departments = \_combosHelper.GetComboDepartments(country.Id),  Teams = \_combosHelper.GetComboTeams(country2.Id),  TeamId = team.Id,  Id = user.Id,  Document = user.Document,  UserTypes=\_combosHelper.GetComboUserTypes(),  UserType=user.UserType.ToString(),  };  return View(model);  }  [HttpPost]  [ValidateAntiForgeryToken]  public async Task<IActionResult> ChangeUser(EditUserViewModel model)  {  if (ModelState.IsValid)  {  var imagePath = string.Empty;  if (model.ImageFile != null)  {  imagePath = await \_imageHelper.UploadImageAsync(model.ImageFile, "Users");  }  User user = await \_userHelper.GetUserAsync(User.Identity.Name);  user.FirstName = model.FirstName;  user.LastName = model.LastName;  user.Address = model.Address;  user.PhoneNumber = model.PhoneNumber;  user.PicturePath = imagePath;  user.City = await \_context.Cities.FindAsync(model.CityId);  user.FavoriteTeam = await \_context.Teams.FindAsync(model.TeamId);  user.Document = model.Document;  await \_userHelper.UpdateUserAsync(user);  return RedirectToAction("Index", "Home");  }  model.Cities = \_combosHelper.GetComboCities(model.DepartmentId);  model.Countries = \_combosHelper.GetComboCountries();  model.Departments = \_combosHelper.GetComboDepartments(model.CityId);  model.Teams = \_combosHelper.GetComboTeams(model.CountryId);  return View(model);  }  public IActionResult ChangePasswordMVC()  {  return View();  }  [HttpPost]  public async Task<IActionResult> ChangePasswordMVC(ChangePasswordViewModel model)  {  if (ModelState.IsValid)  {  var user = await \_userHelper.GetUserAsync(User.Identity.Name);  if (user != null)  {  var result = await \_userHelper.ChangePasswordAsync(user, model.OldPassword, model.NewPassword);  if (result.Succeeded)  {  return RedirectToAction("ChangeUser");  }  else  {  ModelState.AddModelError(string.Empty, result.Errors.FirstOrDefault().Description);  }  }  else  {  ModelState.AddModelError(string.Empty, "Usuario no encontrado.");  }  }  return View(model);  }  public async Task<IActionResult> ConfirmEmail(string userId, string token)  {  if (string.IsNullOrEmpty(userId) || string.IsNullOrEmpty(token))  {  return NotFound();  }  User user = await \_userHelper.GetUserAsync(new Guid(userId));  if (user == null)  {  return NotFound();  }  IdentityResult result = await \_userHelper.ConfirmEmailAsync(user, token);  if (!result.Succeeded)  {  return NotFound();  }  return View();  }  public IActionResult RecoverPasswordMVC()  {  return View();  }  [HttpPost]  public async Task<IActionResult> RecoverPasswordMVC(RecoverPasswordViewModel model)  {  if (ModelState.IsValid)  {  User user = await \_userHelper.GetUserAsync(model.Email);  if (user == null)  {  ModelState.AddModelError(string.Empty, "Este mail no corresponde a un usuario registrado.");  return View(model);  }  string myToken = await \_userHelper.GeneratePasswordResetTokenAsync(user);  string link = Url.Action(  "ResetPassword",  "Account",  new { token = myToken }, protocol: HttpContext.Request.Scheme);  \_mailHelper.SendMail(model.Email, "Reseteo de Password", $"<h1>Reseteo de Password</h1>" +  $"Para resetear el password por favor haga clic en este link: </br></br>" +  $"<a href = \"{link}\">Reset Password</a>");  ViewBag.Message = "Las instrucciones para recuperar su password han sido enviadas a su email.";  return View();  }  return View(model);  }  public IActionResult ResetPassword(string token)  {  return View();  }  [HttpPost]  public async Task<IActionResult> ResetPassword(ResetPasswordViewModel model)  {  User user = await \_userHelper.GetUserAsync(model.UserName);  if (user != null)  {  IdentityResult result = await \_userHelper.ResetPasswordAsync(user, model.Token, model.Password);  if (result.Succeeded)  {  ViewBag.Message = "Password reseteado con éxito.";  return View();  }  ViewBag.Message = "Error mientras se reseteaba el password.";  return View(model);  }  ViewBag.Message = "Usuario no encontrado.";  return View(model);  }  }  } |  |

Dentro de **wwwroot/images** creamos la carpeta **Users**

Dentro agregamos las imágenes **nouser.png, login.png, Reset.png, resetpassword.png**

## Vista Login

Agregamos la Vista **Login**

|  |  |
| --- | --- |
| **Login** | **Comentarios** |
| @model GenericApp.Web.Models.LoginViewModel  @{  ViewData["Title"] = "Login";  }  <h2><img src="/images/Users/login.png" alt="Image" style="width:70;height:70px;max-height: 100%; width: auto;" />  Login</h2>  <div class="row">  <div class="col-md-4 offset-md-4">  <form method="post">  <div **asp-validation-summary**="ModelOnly"></div>  <div class="form-group">  <label **asp-for**="Username">Usuario</label>  <input **asp-for**="Username" class="form-control" />  <span **asp-validation-for**="Username" class="text-warning"></span>  </div>  <script src="~/lib/jquery-validation/dist/jquery.validate.js"></script>  <div class="form-group">  <label **asp-for**="Password">Password</label>  <input **asp-for**="Password" **type**="password" class="form-control" />  <span **asp-validation-for**="Password" class="text-warning"></span>  </div>  <div class="form-group">  <div class="form-check">  <input **asp-for**="RememberMe" **type**="checkbox" class="form-check-input" />  <label **asp-for**="RememberMe" class="form-check-label">Recordarme en este equipo</label>  </div>  <span **asp-validation-for**="RememberMe" class="text-warning"></span>  </div>  <div class="form-group">  <input type="submit" value="Login" class="btn btn-success" />  <a **asp-action**="Register" class="btn btn-primary">Registrar Nuevo Usuario</a>  <a **asp-action**="RecoverPasswordMVC" class="btn btn-link">Olvidó su Password?</a>  </div>  </form>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  } |  |

## Vista ConfirmEMail

Agregamos la Vista **ConfirmEMail**

|  |  |
| --- | --- |
| **ConfirmEMail** | **Comentarios** |
| @{  ViewData["Title"] = "Confirm email";  }  <h2>@ViewData["Title"]</h2>  <div>  <p>  Gracias por confirmar su email. Ahora ya puede ingresar al Sistema.  </p>  </div> |  |

## Vista \_User

Agregamos la vista parcial **\_User**

|  |  |
| --- | --- |
| **\_User** | **Comentarios** |
| @model GenericApp.Web.Models.EditUserViewModel  <div class="form-group">  <label **asp-for**="Document" class="control-label"></label>  <input **asp-for**="Document" class="form-control" />  <span **asp-validation-for**="Document" class="text-danger"></span>  </div>  <div class="form-group">  <label **asp-for**="FirstName" class="control-label"></label>  <input **asp-for**="FirstName" class="form-control" />  <span **asp-validation-for**="FirstName" class="text-danger"></span>  </div>  <div class="form-group">  <label **asp-for**="LastName" class="control-label"></label>  <input **asp-for**="LastName" class="form-control" />  <span **asp-validation-for**="LastName" class="text-danger"></span>  </div>  <div class="form-group">  <label **asp-for**="Address" class="control-label"></label>  <input **asp-for**="Address" class="form-control" />  <span **asp-validation-for**="Address" class="text-danger"></span>  </div>  <div class="form-group">  <label **asp-for**="PhoneNumber" class="control-label"></label>  <input **asp-for**="PhoneNumber" class="form-control" />  <span **asp-validation-for**="PhoneNumber" class="text-danger"></span>  </div>  <div class="form-group">  <label **asp-for**="ImageFile" class="control-label"></label>  <input **asp-for**="ImageFile" class="form-control" **type**="file" />  <span **asp-validation-for**="ImageFile" class="text-danger"></span>  </div> |  |

## Vista \_User2

Agregamos la vista parcial **\_User2**

|  |  |
| --- | --- |
| **\_User2** | **Comentarios** |
| @model GenericApp.Web.Models.EditUserViewModel  <div class="form-group">  <label **asp-for**="CountryId" class="control-label"></label>  <select **asp-for**="CountryId" **asp-items**="Model.Countries" class="form-control"></select>  <span **asp-validation-for**="CountryId" class="text-danger"></span>  </div>  <div class="form-group">  <label **asp-for**="DepartmentId" class="control-label"></label>  <select **asp-for**="DepartmentId" **asp-items**="Model.Departments" class="form-control"></select>  <span **asp-validation-for**="DepartmentId" class="text-danger"></span>  </div>  <div class="form-group">  <label **asp-for**="CityId" class="control-label"></label>  <select **asp-for**="CityId" **asp-items**="Model.Cities" class="form-control"></select>  <span **asp-validation-for**="CityId" class="text-danger"></span>  </div>  <h4>  EQUIPO  </h4>  <div class="form-group">  <label **asp-for**="CountryTeamId" class="control-label"></label>  <select **asp-for**="CountryTeamId" **asp-items**="Model.Countries" class="form-control"></select>  <span **asp-validation-for**="CountryTeamId" class="text-danger"></span>  </div>  <div class="form-group">  <label **asp-for**="TeamId" class="control-label"></label>  <select **asp-for**="TeamId" **asp-items**="Model.Teams" class="form-control"></select>  <span **asp-validation-for**="TeamId" class="text-danger"></span>  </div> |  |

## Vista Register

Agregamos la vista **Register**

|  |  |
| --- | --- |
| **Register** | **Comentarios** |
| @model GenericApp.Web.Models.AddUserViewModel  @{  ViewData["Title"] = "Register";  }  <h2>  <img src="/images/Users/nouser.png" alt="Image" style="width:70;height:70px;max-height: 100%; width: auto;" />  Registrar Nuevo Usuario  </h2>  <hr />  <div class="row">  <form **asp-action**="Register" enctype="multipart/form-data">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <div class="form-group">  <div class="col-md-4">  <h4>  USUARIO Y PASSWORD  </h4>  <label **asp-for**="Username" class="control-label"></label>  <input **asp-for**="Username" class="form-control" />  <span **asp-validation-for**="Username" class="text-danger"></span>      <hr>  <div class="form-group">  <label **asp-for**="Password" class="control-label"></label>  <input **asp-for**="Password" class="form-control" />  <span **asp-validation-for**="Password" class="text-danger"></span>  </div>  </hr>    <hr>  <div class="form-group">  <label **asp-for**="PasswordConfirm" class="control-label"></label>  <input **asp-for**="PasswordConfirm" class="form-control" />  <span **asp-validation-for**="PasswordConfirm" class="text-danger"></span>  </div>  </hr>    </div>  <div class="col-md-4">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <h4>  DATOS PERSONALES  </h4>  <**partial** **name**="\_User" />  </div>  <div class="col-md-4">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <h4>  CIUDAD  </h4>  <**partial** **name**="\_User2" />  </div>  </form>  <div class="form-group">  <input type="submit" value="Registrar" class="btn btn-primary" />  </div>  </div>    <div class="text-success">  <p>  @ViewBag.Message  </p>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  <script type="text/javascript">  $(document).ready(function () {  $("#CountryId").change(function () {  $("#DepartmentId").empty();  $("#DepartmentId").append('<option value="0">[Seleccione una provincia...]</option>');  $("#CityId").empty();  $("#CityId").append('<option value="0">[Seleccione una ciudad...]</option>');  $.ajax({  type: 'POST',  url: '@Url.Action("GetDepartments")',  dataType: 'json',  data: { countryId: $("#CountryId").val() },  success: function (subcategories) {  $.each(subcategories, function (i, department) {  //debugger;  $("#DepartmentId").append('<option value="'  + department.id + '">'  + department.name + '</option>');  });  },  error: function (ex) {  alert('Error al buscar las provincias.' + ex);  }  });  return false;  })  $("#CountryTeamId").change(function () {  $("#TeamId").empty();  $("#TeamId").append('<option value="0">[Seleccione un Equipo...]</option>');  $.ajax({  type: 'POST',  url: '@Url.Action("GetTeams")',  dataType: 'json',  data: { countryId: $("#CountryTeamId").val() },  success: function (subcategories) {  $.each(subcategories, function (i, team) {  //debugger;  $("#TeamId").append('<option value="'  + team.id + '">'  + team.name + '</option>');  });  },  error: function (ex) {  alert('Error al buscar los Equipos.' + ex);  }  });  return false;  })  $("#DepartmentId").change(function () {  $("#CityId").empty();  $("#CityId").append('<option value="0">[Seleccione una ciudad...]</option>');  $.ajax({  type: 'POST',  url: '@Url.Action("GetCities")',  dataType: 'json',  data: { departmentId: $("#DepartmentId").val() },  success: function (cities) {  $.each(cities, function (i, city) {  //debugger;  $("#CityId").append('<option value="'  + city.id + '">'  + city.name + '</option>');  });  },  error: function (ex) {  alert('Error al buscar las ciudades.' + ex);  }  });  return false;  })  });  </script>  } |  |

## Vista ChangeUser

Agregamos la vista **ChangeUser**

|  |  |
| --- | --- |
| **ChangeUser** | **Comentarios** |
| @model GenericApp.Web.Models.EditUserViewModel  @{  ViewData["Title"] = "Edit";  }  <h2>  <img src="@Model.PictureFullPath" style="width:70px;height:70px;border-radius:50%" />  Editar Usuario  </h2>  <h4></h4>  <hr />  <div class="row">  <form **asp-action**="ChangeUser" enctype="multipart/form-data">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <input **type**="hidden" **asp-for**="Id" />  <input **type**="hidden" **asp-for**="PicturePath" />  <div class="form-group">  <div class="col-md-6">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <h4>  DATOS PERSONALES  </h4>  <**partial** **name**="\_User" />  </div>  <div class="col-md-6">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <h4>  CIUDAD  </h4>  <**partial** **name**="\_User2" />  </div>  </form>  <div class="form-group">  <input type="submit" value="Grabar" class="btn btn-primary" />  <a **asp-action**="ChangePasswordMVC" class="btn btn-warning">Cambiar Password</a>  </div>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  <script type="text/javascript">  $(document).ready(function () {  $("#CountryId").change(function () {  $("#DepartmentId").empty();  $("#DepartmentId").append('<option value="0">[Seleccione una provincia...]</option>');  $("#CityId").empty();  $("#CityId").append('<option value="0">[Seleccione una ciudad...]</option>');  $.ajax({  type: 'POST',  url: '@Url.Action("GetDepartments")',  dataType: 'json',  data: { countryId: $("#CountryId").val() },  success: function (subcategories) {  $.each(subcategories, function (i, department) {  //debugger;  $("#DepartmentId").append('<option value="'  + department.id + '">'  + department.name + '</option>');  });  },  error: function (ex) {  alert('Error al buscar las provincias.' + ex);  }  });  return false;  })  $("#CountryTeamId").change(function () {  $("#TeamId").empty();  $("#TeamId").append('<option value="0">[Seleccione un equipo...]</option>');  $.ajax({  type: 'POST',  url: '@Url.Action("GetTeams")',  dataType: 'json',  data: { countryId: $("#CountryTeamId").val() },  success: function (subcategories) {  $.each(subcategories, function (i, department) {  //debugger;  $("#TeamId").append('<option value="'  + department.id + '">'  + department.name + '</option>');  });  },  error: function (ex) {  alert('Error al buscar los equipos.' + ex);  }  });  return false;  })  $("#DepartmentId").change(function () {  $("#CityId").empty();  $("#CityId").append('<option value="0">[Seleccione una ciudad...]</option>');  $.ajax({  type: 'POST',  url: '@Url.Action("GetCities")',  dataType: 'json',  data: { departmentId: $("#DepartmentId").val() },  success: function (cities) {  $.each(cities, function (i, city) {  //debugger;  $("#CityId").append('<option value="'  + city.id + '">'  + city.name + '</option>');  });  },  error: function (ex) {  alert('Error al buscar las ciudades.' + ex);  }  });  return false;  })  });  </script>  } |  |

## Vista ChangePasswordMVC

Agregamos la vista **ChangePasswordMVC**

|  |  |
| --- | --- |
| **ChangePasswordMVC** | **Comentarios** |
| @model GenericApp.Web.Models.ChangePasswordViewModel  @{  ViewData["Title"] = "Register";  }  <h2><img src="/images/Users/resetpassword.png" alt="Image" style="width:70;height:70px;max-height: 100%; width: auto;" />  Cambiar Password</h2>  <div class="row">  <div class="col-md-4 offset-md-4">  <form method="post">  <div **asp-validation-summary**="ModelOnly"></div>  <div class="form-group">  <label **asp-for**="OldPassword">Password actual</label>  <input **asp-for**="OldPassword" **type**="password" class="form-control" />  <span **asp-validation-for**="OldPassword" class="text-warning"></span>  </div>  <div class="form-group">  <label **asp-for**="NewPassword">Nuevo password</label>  <input **asp-for**="NewPassword" **type**="password" class="form-control" />  <span **asp-validation-for**="NewPassword" class="text-warning"></span>  </div>  <div class="form-group">  <label **asp-for**="Confirm">Confirmar password</label>  <input **asp-for**="Confirm" **type**="password" class="form-control" />  <span **asp-validation-for**="Confirm" class="text-warning"></span>  </div>  <div class="form-group">  <input type="submit" value="Cambiar password" class="btn btn-primary" />  <a **asp-action**="ChangeUser" class="btn btn-success">Regresar</a>  </div>  </form>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  } |  |

## Vista RecoverPasswordMVC

Agregamos la vista **RecoverPasswordMVC**

|  |  |
| --- | --- |
| **RecoverPasswordMVC** | **Comentarios** |
|  |  |

## Vista ResetPassword

Agregamos la vista **ResetPassword**

|  |  |
| --- | --- |
| **ResetPassword** | **Comentarios** |
| @model GenericApp.Web.Models.ResetPasswordViewModel  @{  ViewData["Title"] = "Reset Password";  }  <h1><img src="~/images/Users/resetpassword.png" alt="Image" style="width:70;height:70px;max-height: 100%; width: auto;" />  Resetear Password</h1>  <div class="row">  <div class="col-md-4 offset-md-4">  <form method="post">  <div **asp-validation-summary**="All"></div>  <input **type**="hidden" **asp-for**="Token" />  <div class="form-group">  <label **asp-for**="UserName">Email</label>  <input **asp-for**="UserName" class="form-control" />  <span **asp-validation-for**="UserName" class="text-warning"></span>  </div>  <div class="form-group">  <label **asp-for**="Password">Nuevo password</label>  <input **asp-for**="Password" **type**="password" class="form-control" />  <span **asp-validation-for**="Password" class="text-warning"></span>  </div>  <div class="form-group">  <label **asp-for**="ConfirmPassword">Confirmar password</label>  <input **asp-for**="ConfirmPassword" **type**="password" class="form-control" />  <span **asp-validation-for**="ConfirmPassword" class="text-warning"></span>  </div>  <div class="form-group">  <input type="submit" value="Resetear password" class="btn btn-primary" />  </div>  </form>  <div class="text-success">  <p>  @ViewBag.Message  </p>  </div>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  } |  |

## Métodos y Vistas para manejo de errores

Agregamos la vista **NotAuthorized**

|  |  |
| --- | --- |
| **NotAuthorized** | **Comentarios** |
| @{  ViewData["Title"] = "NotAuthorized";  }  <br />  <br />  <img src="~/images/error404.png" />  <h2>No está autorizado para esta acción!</h2> |  |

Dentro de **wwwroot/images** colocamos el archivo **error404.png**

Modificamos **Startup.cs** después de las líneas cookies:

|  |  |
| --- | --- |
| **Startup.cs** | **Comentarios** |
| public void ConfigureServices(IServiceCollection services)  {  services.Configure<CookiePolicyOptions>(options =>  {  options.CheckConsentNeeded = context => true;  options.MinimumSameSitePolicy = SameSiteMode.None;  });  services.ConfigureApplicationCookie(options =>  {  options.LoginPath = "/Account/NotAuthorized";  options.AccessDeniedPath = "/Account/NotAuthorized";  }); |  |

Y más abajo, también en **Startup.cs** agregamos

|  |  |
| --- | --- |
| **Startup.cs** | **Comentarios** |
| public void Configure(IApplicationBuilder app, IHostingEnvironment env)  {  if (env.IsDevelopment())  {  app.UseDeveloperExceptionPage();  }  else  {  app.UseExceptionHandler("/Home/Error");  app.UseHsts();  }  app.UseStatusCodePagesWithReExecute("/error/{0}");  app.UseHttpsRedirection();  app.UseStaticFiles();  app.UseAuthentication();  app.UseCookiePolicy(); |  |

En **HomeController** agregamos estos métodos:

|  |  |
| --- | --- |
| **HomeController** | **Comentarios** |
| [Route("error/404")]  public IActionResult Error404()  {  return View();  } |  |

Agregamos la **Vista Error404**

|  |  |
| --- | --- |
| **Error404** | **Comentarios** |
| @{  ViewData["Title"] = "Error404";  }  <br />  <br />  <img src="~/images/error404.png" />  <h2>Lo siento, página no encontrada.</h2> |  |

## Modificamos el menú \_Layout:

|  |  |
| --- | --- |
| **\_Layout** | **Comentarios** |
| <div class="navbar-collapse collapse">  <ul class="nav navbar-nav">  <li><a **asp-area**="" **asp-controller**="Home" **asp-action**="Index">Home</a></li>  <li><a **asp-area**="" **asp-controller**="Home" **asp-action**="About">About</a></li>  <li><a **asp-area**="" **asp-controller**="Home" **asp-action**="Contact">Contact</a></li>  @if (User.Identity.IsAuthenticated && User.IsInRole("Admin"))  {  <li><a **asp-area**="" **asp-controller**="Countries" **asp-action**="Index">Países</a></li>  <li><a **asp-area**="" **asp-controller**="Categories" **asp-action**="Index">Categorías</a></li>  <li><a **asp-area**="" **asp-controller**="Products" **asp-action**="Index">Productos</a></li>  }  </ul>  <ul class="nav navbar-nav navbar-right">  @if (User.Identity.IsAuthenticated)  {  <li><a **asp-area**="" **asp-controller**="Account" **asp-action**="ChangeUser">@User.Identity.Name</a></li>  <li><a **asp-area**="" **asp-controller**="Account" **asp-action**="Logout">Logout</a></li>  }  else  {  <li><a **asp-area**="" **asp-controller**="Account" **asp-action**="Login">Login</a></li>  }  </div> |  |

# Look & Feel

Modificamos en **Shared/\_Layout**

|  |  |
| --- | --- |
| **Shared/\_Layout** | **Comentarios** |
| <p>&copy; 2021 - GenericApp by Luis Núñez</p> |  |

Agregamos imágenes de 1**200x400** pixeles a la carpeta **wwwroot/images**

Cambiamos la Vista **Index** de **Home** por lo siguiente:

|  |  |
| --- | --- |
| **Index** | **Comentarios** |
| @{  ViewData["Title"] = "Home Page";  }  <div id="myCarousel" class="carousel slide" data-ride="carousel" data-interval="6000">  <ol class="carousel-indicators">  <li data-target="#myCarousel" data-slide-to="0" class="active"></li>  <li data-target="#myCarousel" data-slide-to="1"></li>  <li data-target="#myCarousel" data-slide-to="2"></li>  <li data-target="#myCarousel" data-slide-to="3"></li>  <li data-target="#myCarousel" data-slide-to="4"></li>  <li data-target="#myCarousel" data-slide-to="5"></li>  <li data-target="#myCarousel" data-slide-to="6"></li>  <li data-target="#myCarousel" data-slide-to="7"></li>  </ol>  <div class="carousel-inner" role="listbox">  <div class="item active">  <img src="~/images/v01.jpg" class="img-responsive" />  </div>  <div class="item">  <img src="~/images/v02.jpg" class="img-responsive" />  </div>  <div class="item">  <img src="~/images/v03.jpg" class="img-responsive" />  </div>  <div class="item">  <img src="~/images/v04.jpg" class="img-responsive" />  </div>  <div class="item">  <img src="~/images/v05.jpg" class="img-responsive" />  </div>  <div class="item">  <img src="~/images/v.jpg" class="img-responsive" />  </div>  </div>  <a class="left carousel-control" href="#myCarousel" role="button" data-slide="prev">  <span class="glyphicon glyphicon-chevron-left" aria-hidden="true"></span>  <span class="sr-only">Previous</span>  </a>  <a class="right carousel-control" href="#myCarousel" role="button" data-slide="next">  <span class="glyphicon glyphicon-chevron-right" aria-hidden="true"></span>  <span class="sr-only">Next</span>  </a>  </div>  <div class="row">  </div> |  |

En **\_Layout.cshtml** modificamos

|  |  |
| --- | --- |
| **\_Layout.cshtml** | **Comentarios** |
| <title>@ViewData["Title"] - GenericApp</title>  …….  <a **asp-area**="" **asp-controller**="Home" **asp-action**="Index" class="navbar-brand">GenericApp</a>  ……..  <li><a **asp-area**="" **asp-controller**="Home" **asp-action**="Index">Inicio</a></li>  <li><a **asp-area**="" **asp-controller**="Home" **asp-action**="About">Acerca de</a></li>  <li><a **asp-area**="" **asp-controller**="Home" **asp-action**="Contact">Contacto</a></li> |  |

En **HomeController** modificamos

|  |  |
| --- | --- |
| **HomeController** | **Comentarios** |
| public IActionResult About()  {  ViewData["Message"] = "Esta es una App Genérica.";  return View();  }  public IActionResult Contact()  {  ViewData["Message"] = "Por consultas comunicarse con:";  return View();  } |  |

Vista **Contact**

|  |  |
| --- | --- |
| **Contact** | **Comentarios** |
| @{  ViewData["Title"] = "Contacto";  }  <h2>@ViewData["Title"]</h2>  <h3>@ViewData["Message"]</h3>  <address>  Luis Alberto Núñez<br />  Espora 2052 B° Rosedal - Córdoba<br />  <abr title="Phone">Teléfono:</abr>  351 - 4659552  </address>  <address>  <strong>Contacto:</strong> <a href="mailto:luisalbertonu@gmail.com">luisalbertonu@luisalbertonu.com</a><br />  <strong>Marketing:</strong> <a href="mailto:luisalbertonu@example.com">luisalbertonu@luisalbertonu.com</a>  </address> |  |

Vista **About**

|  |  |
| --- | --- |
| **About** | **Comentarios** |
| @{  ViewData["Title"] = "Acerca de";  }  <h2>@ViewData["Title"]</h2>  <h3>@ViewData["Message"]</h3>  <p>Toda información adicional puede agregarse aquí.</p> |  |

# Administración de Usuarios

Agregamos al método Index de **AccountController**

|  |  |
| --- | --- |
| **AccountController** | **Comentarios** |
| [Authorize(Roles = "Admin")]  public async Task<IActionResult> Index()  {  return View(await \_context.Users  .Include(u => u.City)  .Include(t => t.FavoriteTeam)  .ToListAsync());  } |  |

Agregamos la Vista **Index**

|  |  |
| --- | --- |
| **Index** | **Comentarios** |
| @model IEnumerable<GenericApp.Web.Data.Entities.User>  @{  ViewData["Title"] = "Index";  }  <link rel="stylesheet" href="https://cdn.datatables.net/1.10.19/css/jquery.dataTables.min.css" />  <br />  <p>  <a **asp-action**="Create" class="btn btn-primary"><i class="glyphicon glyphicon-plus"></i> Nuevo Administrador</a>  </p>  <div class="row">  <div class="col-md-12">  <div class="panel panel-default">  <div class="panel-heading">  <h3 class="panel-title">Users</h3>  </div>  <div class="panel-body">  <table class="table table-hover table-responsive table-striped" id="MyTable">  <thead>  <tr>  <th>  @Html.DisplayNameFor(model => model.FullName)  </th>  <th>  @Html.DisplayNameFor(model => model.UserType)  </th>  <th>  @Html.DisplayNameFor(model => model.Email)  </th>  <th>  @Html.DisplayNameFor(model => model.City.Name)  </th>  <th>  @Html.DisplayNameFor(model => model.Address)  </th>  <th>  @Html.DisplayNameFor(model => model.PhoneNumber)  </th>  <th>  @Html.DisplayNameFor(model => model.PictureFullPath)  </th>  <th>  @Html.DisplayNameFor(model => model.FavoriteTeam.LogoImagePath)  </th>  </tr>  </thead>  <tbody>  @foreach (var item in Model)  {  <tr>  <td>  @Html.DisplayFor(modelItem => item.FullName)  </td>  <td>  @Html.DisplayFor(modelItem => item.UserType)  </td>  <td>  @Html.DisplayFor(modelItem => item.Email)  </td>  <td>  @Html.DisplayFor(modelItem => item.City.Name)  </td>  <td>  @Html.DisplayFor(modelItem => item.Address)  </td>  <td>  @Html.DisplayFor(modelItem => item.PhoneNumber)  </td>  <td>  <img src="@item.PictureFullPath" style="width:80px;height:80px;border-radius:50%" />  </td>  <td>  <img src="@item.FavoriteTeam.LogoImagePath" style="width:80px;height:80px;border-radius:50%" />  </td>  </tr>  }  </tbody>  </table>  </div>  </div>  </div>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  <script src="//cdn.datatables.net/1.10.19/js/jquery.dataTables.min.js"></script>  <script src="/js/deleteDialog.js"></script>  <script type="text/javascript">  $(document).ready(function () {  $('#MyTable').DataTable();  });  </script>  } |  |

Agregamos la **Vista Create** para **Account**

|  |  |
| --- | --- |
| **Create** | **Comentarios** |
| @model GenericApp.Web.Models.AddUserViewModel  @{  ViewData["Title"] = "Register";  }  <h2>Agregar Administrador</h2>  <hr />  <div class="row">  <form **asp-action**="Create" enctype="multipart/form-data">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <div class="form-group">  <div class="col-md-4">  <h4>  USUARIO Y PASSWORD  </h4>  <label **asp-for**="Username" class="control-label"></label>  <input **asp-for**="Username" class="form-control" />  <span **asp-validation-for**="Username" class="text-danger"></span>  <hr>  <div class="form-group">  <label **asp-for**="Password" class="control-label"></label>  <input **asp-for**="Password" class="form-control" />  <span **asp-validation-for**="Password" class="text-danger"></span>  </div>  </hr>  <hr>  <div class="form-group">  <label **asp-for**="PasswordConfirm" class="control-label"></label>  <input **asp-for**="PasswordConfirm" class="form-control" />  <span **asp-validation-for**="PasswordConfirm" class="text-danger"></span>  </div>  </hr>  </div>  <div class="col-md-4">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <h4>  DATOS PERSONALES  </h4>  <**partial** **name**="\_User" />  </div>  <div class="col-md-4">  <div **asp-validation-summary**="ModelOnly" class="text-danger"></div>  <h4>  CIUDAD  </h4>  <**partial** **name**="\_User2" />  </div>  </form>  <div class="form-group">  <input type="submit" value="Registrar" class="btn btn-primary" />  </div>  </div>  <div class="text-success">  <p>  @ViewBag.Message  </p>  </div>  @section Scripts {  @{await Html.RenderPartialAsync("\_ValidationScriptsPartial");}  <script type="text/javascript">  $(document).ready(function () {  $("#CountryId").change(function () {  $("#DepartmentId").empty();  $("#DepartmentId").append('<option value="0">[Seleccione una provincia...]</option>');  $("#CityId").empty();  $("#CityId").append('<option value="0">[Seleccione una ciudad...]</option>');  $.ajax({  type: 'POST',  url: '@Url.Action("GetDepartments")',  dataType: 'json',  data: { countryId: $("#CountryId").val() },  success: function (subcategories) {  $.each(subcategories, function (i, department) {  //debugger;  $("#DepartmentId").append('<option value="'  + department.id + '">'  + department.name + '</option>');  });  },  error: function (ex) {  alert('Error al buscar las provincias.' + ex);  }  });  return false;  })  $("#CountryTeamId").change(function () {  $("#TeamId").empty();  $("#TeamId").append('<option value="0">[Seleccione un Equipo...]</option>');  $.ajax({  type: 'POST',  url: '@Url.Action("GetTeams")',  dataType: 'json',  data: { countryId: $("#CountryTeamId").val() },  success: function (subcategories) {  $.each(subcategories, function (i, team) {  //debugger;  $("#TeamId").append('<option value="'  + team.id + '">'  + team.name + '</option>');  });  },  error: function (ex) {  alert('Error al buscar los Equipos.' + ex);  }  });  return false;  })  $("#DepartmentId").change(function () {  $("#CityId").empty();  $("#CityId").append('<option value="0">[Seleccione una ciudad...]</option>');  $.ajax({  type: 'POST',  url: '@Url.Action("GetCities")',  dataType: 'json',  data: { departmentId: $("#DepartmentId").val() },  success: function (cities) {  $.each(cities, function (i, city) {  //debugger;  $("#CityId").append('<option value="'  + city.id + '">'  + city.name + '</option>');  });  },  error: function (ex) {  alert('Error al buscar las ciudades.' + ex);  }  });  return false;  })  });  </script>  } |  |

En el Proyecto **Web**, en **Views/Shared/\_Layout.cshtml** agregamos:

|  |  |
| --- | --- |
| **\_Layout.cshtml** | **Comentarios** |
| @if (User.Identity.IsAuthenticated && User.IsInRole("Admin"))  {  <li><a **asp-area**="" **asp-controller**="Account" **asp-action**="Index">Usuarios</a></li>  <li><a **asp-area**="" **asp-controller**="Countries" **asp-action**="Index">Países</a></li>  <li><a **asp-area**="" **asp-controller**="Categories" **asp-action**="Index">Categorías</a></li>  <li><a **asp-area**="" **asp-controller**="Products" **asp-action**="Index">Productos</a></li>  } |  |

# API sin seguridad

## CountriesController

Creamos la carpeta **API** dentro de la carpeta Controllers, y dentro de API creamos el **CountriesController** con el siguiente código:

|  |  |
| --- | --- |
| **CountriesController** | **Comentarios** |
| using Microsoft.AspNetCore.Mvc;  using Microsoft.EntityFrameworkCore;  using GenericApp.Web.Data;  namespace GenericApp.Web.Controllers.API  {  [ApiController]  [Route("api/[controller]")]  public class CountriesController : ControllerBase  {  private readonly DataContext \_context;  public CountriesController(DataContext context)  {  \_context = context;  }  [HttpGet]  public IActionResult GetCountries()  {  return Ok(\_context.Countries  .Include(c => c.Departments)  .ThenInclude(d => d.Cities)  .Include(t => t.Teams));  }  }  } |  |

## CategoriesController

|  |  |
| --- | --- |
| **CategoriesController** | **Comentarios** |
| using Microsoft.AspNetCore.Mvc;  using GenericApp.Web.Data;  namespace GenericApp.Web.Controllers.API  {  [ApiController]  [Route("api/[controller]")]  public class CategoriesController : ControllerBase  {  private readonly DataContext \_context;  public CategoriesController(DataContext context)  {  \_context = context;  }  [HttpGet]  public IActionResult GetCategories()  {  return Ok(\_context.Categories);  }  }  } |  |

## ProductsController

Creamos el **ProductsController**

|  |  |
| --- | --- |
| **ProductsController** | **Comentarios** |
| using Microsoft.AspNetCore.Mvc;  using Microsoft.EntityFrameworkCore;  using GenericApp.Web.Data;  using GenericApp.Web.Data.Entities;  using System.Collections.Generic;  using System.Linq;  using System.Threading.Tasks;  namespace GenericApp.Web.Controllers.API  {  [ApiController]  [Route("api/[controller]")]  public class ProductsController : ControllerBase  {  private readonly DataContext \_context;  public ProductsController(DataContext context)  {  \_context = context;  }  [HttpGet]  public async Task<IActionResult> GetProducts()  {  List<ProductEntity> products = await \_context.Products  .Include(p => p.Category)  .Include(p => p.ProductImages)  .Where(p => p.IsActive)  .ToListAsync();  return Ok(products);  }  }  } |  |

## AccountController

Creamos el **AccountController**

|  |  |
| --- | --- |
| **AccountController** | **Comentarios** |
| using Microsoft.AspNetCore.Authentication.JwtBearer;  using Microsoft.AspNetCore.Authorization;  using Microsoft.AspNetCore.Identity;  using Microsoft.AspNetCore.Mvc;  using Microsoft.EntityFrameworkCore;  using Microsoft.Extensions.Configuration;  using Microsoft.IdentityModel.Tokens;  using GenericApp.Common.Enums;  using GenericApp.Common.Requests;  using GenericApp.Common.Responses;  using GenericApp.Web.Data;  using GenericApp.Web.Data.Entities;  using GenericApp.Web.Helpers;  using GenericApp.Web.Models;  using System;  using System.Collections.Generic;  using System.IdentityModel.Tokens.Jwt;  using System.Linq;  using System.Security.Claims;  using System.Text;  using System.Threading.Tasks;  namespace GenericApp.Web.Controllers.API  {  [ApiController]  [Route("api/[controller]")]  public class AccountController : ControllerBase  {  private readonly IUserHelper \_userHelper;  private readonly IConfiguration \_configuration;  private readonly IImageHelper \_imageHelper;  private readonly IMailHelper \_mailHelper;  private readonly DataContext \_context;  public AccountController(IUserHelper userHelper, IConfiguration configuration, IImageHelper imageHelper,  IMailHelper mailHelper, DataContext context)  {  \_userHelper = userHelper;  \_configuration = configuration;  \_imageHelper = imageHelper;  \_mailHelper = mailHelper;  \_context = context;  }  [HttpPost]  [Route("CreateToken")]  public async Task<IActionResult> CreateToken([FromBody] LoginViewModel model)  {  if (ModelState.IsValid)  {  User user = await \_userHelper.GetUserAsync(model.Username);  if (user != null)  {  Microsoft.AspNetCore.Identity.SignInResult result = await \_userHelper.ValidatePasswordAsync(user, model.Password);  if (result.Succeeded)  {  Claim[] claims = new[]  {  new Claim(JwtRegisteredClaimNames.Sub, user.Email),  new Claim(JwtRegisteredClaimNames.Jti, Guid.NewGuid().ToString())  };  SymmetricSecurityKey key = new SymmetricSecurityKey(Encoding.UTF8.GetBytes(\_configuration["Tokens:Key"]));  SigningCredentials credentials = new SigningCredentials(key, SecurityAlgorithms.HmacSha256);  JwtSecurityToken token = new JwtSecurityToken(  \_configuration["Tokens:Issuer"],  \_configuration["Tokens:Audience"],  claims,  expires: DateTime.UtcNow.AddDays(99),  signingCredentials: credentials);  var results = new  {  token = new JwtSecurityTokenHandler().WriteToken(token),  expiration = token.ValidTo,  user  };  return Created(string.Empty, results);  }  }  }  return BadRequest();  }  [Authorize(AuthenticationSchemes = JwtBearerDefaults.AuthenticationScheme)]  [HttpGet]  public async Task<IActionResult> GetUser()  {  if (!ModelState.IsValid)  {  return BadRequest();  }  string email = User.Claims.FirstOrDefault(c => c.Type == ClaimTypes.NameIdentifier).Value;  User user = await \_userHelper.GetUserAsync(email);  if (user == null)  {  return NotFound("Este Usuario no existe.");  }  return Ok(user);  }  [HttpPost]  [Route("Register")]  public async Task<IActionResult> PostUser([FromBody] UserRequest request)  {  if (!ModelState.IsValid)  {  return BadRequest(new Response  {  IsSuccess = false,  Message = "Requerimiento inválido",  Result = ModelState  });  }  User user = await \_userHelper.GetUserAsync(request.Email);  if (user != null)  {  return BadRequest(new Response  {  IsSuccess = false,  Message = "Este Usuario ya existe"  });  }  CityEntity city = await \_context.Cities.FindAsync(request.CityId);  if (city == null)  {  return BadRequest(new Response  {  IsSuccess = false,  Message = "Esta ciudad no existe"  });  }  TeamEntity team = await \_context.Teams.FindAsync(request.FavoriteTeamId);  if (team == null)  {  return BadRequest(new Response  {  IsSuccess = false,  Message = "Este Equipo no existe"  });  }  string picturePath = String.Empty;  if (request.PictureArray != null)  {  picturePath = \_imageHelper.UploadImage(request.PictureArray, "users");  }  user = new User  {  Address = request.Address,  Document = request.Document,  Email = request.Email,  FirstName = request.FirstName,  LastName = request.LastName,  PhoneNumber = request.Phone,  UserName = request.Email,  PicturePath = picturePath,  UserType = UserType.User,  City = city,  FavoriteTeam=team  };  IdentityResult result = await \_userHelper.AddUserAsync(user, request.Password);  if (result != IdentityResult.Success)  {  return BadRequest(result.Errors.FirstOrDefault().Description);  }  User userNew = await \_userHelper.GetUserAsync(request.Email);  await \_userHelper.AddUserToRoleAsync(userNew, user.UserType.ToString());  string myToken = await \_userHelper.GenerateEmailConfirmationTokenAsync(user);  string tokenLink = Url.Action("ConfirmEmail", "Account", new  {  userid = user.Id,  token = myToken  }, protocol: HttpContext.Request.Scheme);  \_mailHelper.SendMail(request.Email, "Confirmación de Email", $"<h1>Confirmación de Email</h1>" +  $"Para confirmar su Email por favor haga clic en este link <p><a href = \"{tokenLink}\">Confirmación de Email</a></p>");  return Ok(new Response { IsSuccess = true });  }  [HttpPost]  [Route("RecoverPassword")]  public async Task<IActionResult> RecoverPassword([FromBody] EmailRequest request)  {  if (!ModelState.IsValid)  {  return BadRequest(new Response  {  IsSuccess = false,  Message = "Requerimiento inválido"  });  }  User user = await \_userHelper.GetUserAsync(request.Email);  if (user == null)  {  return BadRequest(new Response  {  IsSuccess = false,  Message = "El Usuario no existe"  });  }  string myToken = await \_userHelper.GeneratePasswordResetTokenAsync(user);  string link = Url.Action("ResetPassword", "Account", new { token = myToken }, protocol: HttpContext.Request.Scheme);  \_mailHelper.SendMail(request.Email, "Recuperación de Password", $"<h1>Recuperación de Password</h1>" +  $"Haga clic en el siguiente link para cambiar su password: <p>" +  $"<a href = \"{link}\">Cambiar Password</a></p>");  return Ok(new Response  {  IsSuccess = true,  Message = "Se le envió un mail con instrucciones para resetear el Password."  });  }  [Authorize(AuthenticationSchemes = JwtBearerDefaults.AuthenticationScheme)]  [HttpPut]  public async Task<IActionResult> PutUser([FromBody] UserRequest request)  {  if (!ModelState.IsValid)  {  return BadRequest(ModelState);  }  string email = User.Claims.FirstOrDefault(c => c.Type == ClaimTypes.NameIdentifier).Value;  User user = await \_userHelper.GetUserAsync(email);  if (user == null)  {  return NotFound("Este Usuario no existe.");  }  CityEntity city = await \_context.Cities.FindAsync(request.CityId);  if (city == null)  {  return BadRequest(new Response  {  IsSuccess = false,  Message = "Este Ciudad no existe."  });  }  TeamEntity team = await \_context.Teams.FindAsync(request.FavoriteTeamId);  if (team == null)  {  return BadRequest(new Response  {  IsSuccess = false,  Message = "Este Equipo no existe."  });  }  string picturePath = user.PicturePath;  if (request.PictureArray != null && request.PictureArray.Length > 0)  {  picturePath = \_imageHelper.UploadImage(request.PictureArray, "Users");  }  user.FirstName = request.FirstName;  user.LastName = request.LastName;  user.Address = request.Address;  user.PhoneNumber = request.Phone;  user.Document = request.Document;  user.City = city;  user.PicturePath = picturePath;  user.FavoriteTeam = team;  IdentityResult respose = await \_userHelper.UpdateUserAsync(user);  if (!respose.Succeeded)  {  return BadRequest(respose.Errors.FirstOrDefault().Description);  }  User updatedUser = await \_userHelper.GetUserAsync(email);  return Ok(updatedUser);  }  [Authorize(AuthenticationSchemes = JwtBearerDefaults.AuthenticationScheme)]  [HttpPost]  [Route("ChangePassword")]  public async Task<IActionResult> ChangePassword([FromBody] ChangePasswordRequest request)  {  if (!ModelState.IsValid)  {  return BadRequest(new Response  {  IsSuccess = false,  Message = "Requerimiento inválido",  Result = ModelState  });  }  string email = User.Claims.FirstOrDefault(c => c.Type == ClaimTypes.NameIdentifier).Value;  User user = await \_userHelper.GetUserAsync(email);  if (user == null)  {  return NotFound("Este Usuario no existe.");  }  IdentityResult result = await \_userHelper.ChangePasswordAsync(user, request.OldPassword, request.NewPassword);  if (!result.Succeeded)  {  return BadRequest(new Response  {  IsSuccess = false,  Message = result.Errors.FirstOrDefault().Description  });  }  return Ok(new Response  {  IsSuccess = true,  Message = "El password fue cambiado con éxito."  });  }  [HttpGet]  [Route("GetUsers")]  public async Task<IActionResult> GetUsers()  {  List<User> users = await \_context.Users  .Include(u => u.City)  .Include(t => t.FavoriteTeam)  .ToListAsync();  return Ok(users);  }  }  } |  |

## Agregamos la configuración en el Startup

|  |  |
| --- | --- |
| **Startup** | **Comentarios** |
| ………….  .AddDefaultTokenProviders()  .AddEntityFrameworkStores<DataContext>();  services.AddAuthentication()  .AddCookie()  .AddJwtBearer(cfg =>  {  cfg.TokenValidationParameters = new TokenValidationParameters  {  ValidIssuer = Configuration["Tokens:Issuer"],  ValidAudience = Configuration["Tokens:Audience"],  IssuerSigningKey = new SymmetricSecurityKey(Encoding.UTF8.GetBytes(Configuration["Tokens:Key"]))  };  });  services.AddDbContext<DataContext>(cfg =>  {  cfg.UseSqlServer(Configuration.GetConnectionString("DefaultConnection"));  });  …………. |  |

# PROYECTO PRISM

# Inicializar el Xamarin.FFImageLoading.Forms

En **MainActivity** ponemos:

|  |  |
| --- | --- |
| **MainActivity** | **Comentarios** |
| global::Xamarin.Forms.Forms.Init(this, savedInstanceState);  FFImageLoading.Forms.Platform.CachedImageRenderer.Init(true);  LoadApplication(new App(new AndroidInitializer())); |  |

# Iconos

En el Proyecto **Prism.Android** agregamos en la carpeta **Resources/drawable/** los íconos:

* ic\_more\_vert.png
* ic\_card\_giftcard
* ic\_person
* ic\_exit\_to\_app
* ic\_home

# ApiService

En el proyecto **Common** creamos la carpeta **Services** y dentro de esta creamos la interfaz **IApiService**:

|  |  |
| --- | --- |
| **IApiService** | **Comentarios** |
| using OnSale.Common.Models;  using OnSale.Common.Requests;  using OnSale.Common.Responses;  using System.IO;  using System.Threading.Tasks;  namespace OnSale.Common.Services  {  public interface IApiService  {  Task<Response> GetListAsync<T>(string urlBase, string servicePrefix, string controller);  Task<Response> GetTokenAsync(string urlBase, string servicePrefix, string controller, TokenRequest request);  Task<Response> PostQualificationAsync(string urlBase, string servicePrefix, string controller, QualificationRequest qualificationRequest, string token);  Task<Response> RegisterUserAsync(string urlBase, string servicePrefix, string controller, UserRequest userRequest);  Task<Response> RecoverPasswordAsync(string urlBase, string servicePrefix, string controller, EmailRequest emailRequest);  Task<Response> ModifyUserAsync(string urlBase, string servicePrefix, string controller, UserRequest userRequest, string token);  Task<Response> ChangePasswordAsync(string urlBase, string servicePrefix, string controller, ChangePasswordRequest changePasswordRequest, string token);  Task<Response> PostAsync<T>(string urlBase, string servicePrefix, string controller, T model, string token);  Task<Response> GetListAsync<T>(string urlBase, string servicePrefix, string controller, string token);  Task<Response> PutAsync<T>(string urlBase, string servicePrefix, string controller, T model, string token);  Task<RandomUsers> GetRandomUser(string urlBase, string servicePrefix);  Task<Stream> GetPictureAsync(string urlBase, string servicePrefix);  }  } |  |

En **Common**/**Services** creamos la clase **ApiService**:

|  |  |
| --- | --- |
| **ApiService** | **Comentarios** |
| using Newtonsoft.Json;  using GenericApp.Common.Requests;  using GenericApp.Common.Responses;  using System;  using System.Collections.Generic;  using System.IO;  using System.Net.Http;  using System.Net.Http.Headers;  using System.Text;  using System.Threading.Tasks;  namespace GenericApp.Common.Services  {  public class ApiService : IApiService  {  public async Task<Response> GetListAsync<T>(  string urlBase,  string servicePrefix,  string controller)  {  try  {  HttpClient client = new HttpClient  {  BaseAddress = new Uri(urlBase),  };  string url = $"{servicePrefix}{controller}";  HttpResponseMessage response = await client.GetAsync(url);  string result = await response.Content.ReadAsStringAsync();  if (!response.IsSuccessStatusCode)  {  return new Response  {  IsSuccess = false,  Message = result,  };  }  List<T> list = JsonConvert.DeserializeObject<List<T>>(result);  return new Response  {  IsSuccess = true,  Result = list  };  }  catch (Exception ex)  {  return new Response  {  IsSuccess = false,  Message = ex.Message  };  }  }  public async Task<Response> GetTokenAsync(string urlBase, string servicePrefix, string controller, TokenRequest request)  {  try  {  string requestString = JsonConvert.SerializeObject(request);  StringContent content = new StringContent(requestString, Encoding.UTF8, "application/json");  HttpClient client = new HttpClient  {  BaseAddress = new Uri(urlBase)  };  string url = $"{servicePrefix}{controller}";  HttpResponseMessage response = await client.PostAsync(url, content);  string result = await response.Content.ReadAsStringAsync();  if (!response.IsSuccessStatusCode)  {  return new Response  {  IsSuccess = false,  Message = result,  };  }  TokenResponse token = JsonConvert.DeserializeObject<TokenResponse>(result);  return new Response  {  IsSuccess = true,  Result = token  };  }  catch (Exception ex)  {  return new Response  {  IsSuccess = false,  Message = ex.Message  };  }  }  public async Task<Response> RegisterUserAsync(string urlBase, string servicePrefix, string controller, UserRequest userRequest)  {  try  {  string request = JsonConvert.SerializeObject(userRequest);  StringContent content = new StringContent(request, Encoding.UTF8, "application/json");  HttpClient client = new HttpClient  {  BaseAddress = new Uri(urlBase)  };  string url = $"{servicePrefix}{controller}";  HttpResponseMessage response = await client.PostAsync(url, content);  string answer = await response.Content.ReadAsStringAsync();  Response obj = JsonConvert.DeserializeObject<Response>(answer);  return obj;  }  catch (Exception ex)  {  return new Response  {  IsSuccess = false,  Message = ex.Message  };  }  }  public async Task<Response> RecoverPasswordAsync(string urlBase, string servicePrefix, string controller, EmailRequest emailRequest)  {  try  {  string request = JsonConvert.SerializeObject(emailRequest);  StringContent content = new StringContent(request, Encoding.UTF8, "application/json");  HttpClient client = new HttpClient  {  BaseAddress = new Uri(urlBase)  };  string url = $"{servicePrefix}{controller}";  HttpResponseMessage response = await client.PostAsync(url, content);  string answer = await response.Content.ReadAsStringAsync();  Response obj = JsonConvert.DeserializeObject<Response>(answer);  return obj;  }  catch (Exception ex)  {  return new Response  {  IsSuccess = false,  Message = ex.Message,  };  }  }  public async Task<Response> ModifyUserAsync(string urlBase, string servicePrefix, string controller, UserRequest userRequest, string token)  {  try  {  string request = JsonConvert.SerializeObject(userRequest);  StringContent content = new StringContent(request, Encoding.UTF8, "application/json");  HttpClient client = new HttpClient  {  BaseAddress = new Uri(urlBase)  };  client.DefaultRequestHeaders.Authorization = new AuthenticationHeaderValue("bearer", token);  string url = $"{servicePrefix}{controller}";  HttpResponseMessage response = await client.PutAsync(url, content);  string answer = await response.Content.ReadAsStringAsync();  if (!response.IsSuccessStatusCode)  {  return JsonConvert.DeserializeObject<Response>(answer);  }  UserResponse user = JsonConvert.DeserializeObject<UserResponse>(answer);  return new Response  {  IsSuccess = true,  Result = user  };  }  catch (Exception ex)  {  return new Response  {  IsSuccess = false,  Message = ex.Message  };  }  }  public async Task<Response> ChangePasswordAsync(string urlBase, string servicePrefix, string controller, ChangePasswordRequest changePasswordRequest, string token)  {  try  {  string request = JsonConvert.SerializeObject(changePasswordRequest);  StringContent content = new StringContent(request, Encoding.UTF8, "application/json");  HttpClient client = new HttpClient  {  BaseAddress = new Uri(urlBase)  };  client.DefaultRequestHeaders.Authorization = new AuthenticationHeaderValue("bearer", token);  string url = $"{servicePrefix}{controller}";  HttpResponseMessage response = await client.PostAsync(url, content);  string answer = await response.Content.ReadAsStringAsync();  Response obj = JsonConvert.DeserializeObject<Response>(answer);  return obj;  }  catch (Exception ex)  {  return new Response  {  IsSuccess = false,  Message = ex.Message,  };  }  }  public async Task<Response> PostAsync<T>(string urlBase, string servicePrefix, string controller, T model, string token)  {  try  {  string request = JsonConvert.SerializeObject(model);  StringContent content = new StringContent(request, Encoding.UTF8, "application/json");  HttpClient client = new HttpClient  {  BaseAddress = new Uri(urlBase)  };  client.DefaultRequestHeaders.Authorization = new AuthenticationHeaderValue("bearer", token);  string url = $"{servicePrefix}{controller}";  HttpResponseMessage response = await client.PostAsync(url, content);  string result = await response.Content.ReadAsStringAsync();  if (!response.IsSuccessStatusCode)  {  return new Response  {  IsSuccess = false,  Message = result,  };  }  T item = JsonConvert.DeserializeObject<T>(result);  return new Response  {  IsSuccess = true,  Result = item  };  }  catch (Exception ex)  {  return new Response  {  IsSuccess = false,  Message = ex.Message  };  }  }  public async Task<Response> GetListAsync<T>(string urlBase, string servicePrefix, string controller, string token)  {  try  {  HttpClient client = new HttpClient  {  BaseAddress = new Uri(urlBase),  };  client.DefaultRequestHeaders.Authorization = new AuthenticationHeaderValue("bearer", token);  string url = $"{servicePrefix}{controller}";  HttpResponseMessage response = await client.GetAsync(url);  string result = await response.Content.ReadAsStringAsync();  if (!response.IsSuccessStatusCode)  {  return new Response  {  IsSuccess = false,  Message = result,  };  }  List<T> list = JsonConvert.DeserializeObject<List<T>>(result);  return new Response  {  IsSuccess = true,  Result = list  };  }  catch (Exception ex)  {  return new Response  {  IsSuccess = false,  Message = ex.Message  };  }  }  public async Task<Response> PutAsync<T>(string urlBase, string servicePrefix, string controller, T model, string token)  {  try  {  string request = JsonConvert.SerializeObject(model);  StringContent content = new StringContent(request, Encoding.UTF8, "application/json");  HttpClient client = new HttpClient  {  BaseAddress = new Uri(urlBase)  };  client.DefaultRequestHeaders.Authorization = new AuthenticationHeaderValue("bearer", token);  string url = $"{servicePrefix}{controller}";  HttpResponseMessage response = await client.PutAsync(url, content);  string result = await response.Content.ReadAsStringAsync();  if (!response.IsSuccessStatusCode)  {  return new Response  {  IsSuccess = false,  Message = result,  };  }  T item = JsonConvert.DeserializeObject<T>(result);  return new Response  {  IsSuccess = true,  Result = item  };  }  catch (Exception ex)  {  return new Response  {  IsSuccess = false,  Message = ex.Message  };  }  }  public async Task<Stream> GetPictureAsync(string urlBase, string servicePrefix)  {  try  {  HttpClient client = new HttpClient  {  BaseAddress = new Uri(urlBase),  };  string url = $"{servicePrefix}";  HttpResponseMessage response = await client.GetAsync(url);  Stream stream = await response.Content.ReadAsStreamAsync();  if (!response.IsSuccessStatusCode)  {  return null;  }  return stream;  }  catch  {  return null;  }  }  }  } |  |

Adicionamos la inyección del servicio creado en **App.xaml.cs**:

|  |  |
| --- | --- |
| **App.xaml.cs** | **Comentarios** |
| protected override void RegisterTypes(IContainerRegistry containerRegistry)  {  containerRegistry.RegisterSingleton<IAppInfo, AppInfoImplementation>();  containerRegistry.Register<IApiService, ApiService>();  containerRegistry.RegisterForNavigation<NavigationPage>();  containerRegistry.RegisterForNavigation<MainPage, MainPageViewModel>();  } |  |

# App

## App.xaml

En **App.xaml** definimos la dirección web del proyecto, los colores y los estilos que se aplicarán a los controles:

|  |  |
| --- | --- |
| **App.xaml** | **Comentarios** |
| <?xml version="1.0" encoding="utf-8" ?>  <prism:PrismApplication xmlns="http://xamarin.com/schemas/2014/forms"  xmlns:x="http://schemas.microsoft.com/winfx/2009/xaml"  xmlns:prism="http://prismlibrary.com"  x:Class="GenericApp.Prism.App">  <Application.Resources>  <!-- Parameters -->  <x:String x:Key="UrlAPI">http://keypress.serveftp.net:88/GenericAppApi/</x:String>  <x:String x:Key="UrlNoImage">noimage.png</x:String>  <x:String x:Key="UrlNoUser">nouser.png</x:String>  <!-- Colors -->  <Color x:Key="ColorBackground">#D9D9D9</Color>  <Color x:Key="ColorPrimary">#3E518C</Color>  <Color x:Key="ColorSecondary">#8C8C8C</Color>  <Color x:Key="ColorDanger">#73221A</Color>  <Color x:Key="ColorAccent">#73221A</Color>  <Color x:Key="ColorFont">#0D0D0D</Color>  <Color x:Key="ColorFontInverse">#D9D9D9</Color>  <!-- Styles -->  <Style TargetType="Button">  <Setter Property="BackgroundColor" Value="{StaticResource ColorPrimary}" />  <Setter Property="HorizontalOptions" Value="FillAndExpand" />  <Setter Property="TextColor" Value="{StaticResource ColorFontInverse}" />  </Style>  <Style TargetType="Label">  <Setter Property="TextColor" Value="{StaticResource ColorFont}" />  </Style>  <Style x:Key="SecondaryButton" TargetType="Button">  <Setter Property="BackgroundColor" Value="{StaticResource ColorSecondary}" />  </Style>  <Style x:Key="DangerButton" TargetType="Button">  <Setter Property="BackgroundColor" Value="{StaticResource ColorDanger}" />  </Style>  </Application.Resources>  </prism:PrismApplication> | Dirección web del proyecto  Colores  Estilos |

## App.xaml.cs

Modificamos la página de inicio:

|  |  |
| --- | --- |
| **App.xaml.cs** | **Comentarios** |
| await NavigationService.NavigateAsync($"{nameof(GenericAppMasterDetailPage)}/NavigationPage/{nameof(ProductsPage)}"); |  |

# Icono & Splash

Adicionamos una imagen para el Splash en la carpeta **drawable**, las dimensiones deben ser: 480 x 800 pixels o su equivalente y la llamamos **splash.png**.

Adicione estas líneas a **styles.xml**.

|  |  |
| --- | --- |
| **styles.xml** | **Comentarios** |
| <style name="Theme.Splash" parent="android:Theme">  <item name="android:windowBackground">@drawable/Splash</item>  <item name="android:windowNoTitle">true</item>  </style>  </resources> |  |

Para el ícono vamos al **Android** **Asset** **Studio** a la opción **Launcher** **icon** **Generator.** Bajamos el ZIP, lo descomprimimos e incorporamos los archivos **ic\_launcher.png** a las carpetas **mimaps**.

Por otro lado en el archivo Properties de Android, en la opción Manifiesto cambiamos el nombre de la App

En **drawable** hay un archivo llamado **splash\_screen.xml**. Le ponemos:

|  |  |
| --- | --- |
| **splash\_screen.xml** | **Comentarios** |
| <?xml version="1.0" encoding="utf-8" ?>  <layer-list xmlns:android="http://schemas.android.com/apk/res/android">  <item android:drawable="@color/launcher\_background"/>  <item>  <bitmap android:gravity="fill"  android:src="@drawable/splash" />  </item>  </layer-list> |  |

# Settings

En el Proyecto **Common** creamos la carpeta **Helpers** y dentro de esta la clase **Settings**:

|  |  |
| --- | --- |
| **Settings** | **Comentarios** |
| using Plugin.Settings;  using Plugin.Settings.Abstractions;  namespace GenericApp.Common.Helpers  {  public static class Settings  {  private const string \_token = "token";  private const string \_isLogin = "isLogin";  private const string \_product = "product";  private static readonly string \_stringDefault = string.Empty;  private static readonly bool \_boolDefault = false;  private static ISettings AppSettings => CrossSettings.Current;  public static string Token  {  get => AppSettings.GetValueOrDefault(\_token, \_stringDefault);  set => AppSettings.AddOrUpdateValue(\_token, value);  }  public static bool IsLogin  {  get => AppSettings.GetValueOrDefault(\_isLogin, \_boolDefault);  set => AppSettings.AddOrUpdateValue(\_isLogin, value);  }  public static string Product  {  get => AppSettings.GetValueOrDefault(\_product, \_stringDefault);  set => AppSettings.AddOrUpdateValue(\_product, value);  }  }  } |  |

# FilesHelper

Dentro de la carpeta **Common**/**Helpers** creamos la interfaz **IFilesHelper**:

|  |  |
| --- | --- |
| **IFilesHelper** | **Comentarios** |
| using System.IO;  namespace GenericApp.Common.Helpers  {  public interface IFilesHelper  {  byte[] ReadFully(Stream input);  }  } |  |

Luego creamos la implementación **FilesHelper**

|  |  |
| --- | --- |
| **FilesHelper** | **Comentarios** |
| using System.IO;  namespace GenericApp.Common.Helpers  {  public class FilesHelper : IFilesHelper  {  public byte[] ReadFully(Stream input)  {  using (MemoryStream ms = new MemoryStream())  {  input.CopyTo(ms);  return ms.ToArray();  }  }  }  } |  |

Adicionamos la inyección del servicio creado en **App.xaml.cs**:

|  |  |
| --- | --- |
| **App.xaml.cs** | **Comentarios** |
| protected override void RegisterTypes(IContainerRegistry containerRegistry)  {  containerRegistry.RegisterSingleton<IAppInfo, AppInfoImplementation>();  containerRegistry.Register<IApiService, ApiService>();  containerRegistry.Register<IFilesHelper, FilesHelper>();  …… |  |

# RegexHelper

En el Proyecto **Prism** creamos la carpeta **Helpers** y dentro de esta la clase **IRegexHelper**:

|  |  |
| --- | --- |
| **IRegexHelper** | **Comentarios** |
| namespace GenericApp.Prism.Helpers  {  public interface IRegexHelper  {  bool IsValidEmail(string emailaddress);  }  } |  |

Luego creamos la implementación **RegexHelper**

|  |  |
| --- | --- |
| **RegexHelper** | **Comentarios** |
| using System;  using System.Net.Mail;  namespace GenericApp.Prism.Helpers  {  public class RegexHelper : IRegexHelper  {  public bool IsValidEmail(string emailaddress)  {  try  {  new MailAddress(emailaddress);  return true;  }  catch (FormatException)  {  return false;  }  }  }  } |  |

Adicionamos la inyección del servicio creado en **App.xaml.cs**:

|  |  |
| --- | --- |
| **App.xaml.cs** | **Comentarios** |
| protected override void RegisterTypes(IContainerRegistry containerRegistry)  {  containerRegistry.RegisterSingleton<IAppInfo, AppInfoImplementation>();  containerRegistry.Register<IApiService, ApiService>();  containerRegistry.Register<IFilesHelper, FilesHelper>();  containerRegistry.Register<IRegexHelper, RegexHelper>();  …… |  |

# Models

## Clase ElementsList

En el Proyecto **Common** creamos la carpeta **Models** y dentro de esta la clase **ElementsList**:

|  |  |
| --- | --- |
| **ElementsList** | **Comentarios** |
| namespace GenericApp.Common.Models  {  public class ElementsList  {  public int Id { get; set; }  public string Name { get; set; }  }  } |  |

## Clase Menu

En la carpeta **Common/** **Models** creamos la clase **Menu**:

|  |  |
| --- | --- |
| **Menu** | **Comentarios** |
| namespace GenericApp.Common.Models  {  public class Menu  {  public string Icon { get; set; }  public string Title { get; set; }  public string PageName { get; set; }  public bool IsLoginRequired { get; set; }  }  } |  |

# CombosHelper

En el Proyecto **Prism** dentro de la carpeta **Helpers** creamos la clase **ICombosHelper**

|  |  |
| --- | --- |
| **ICombosHelper** | **Comentarios** |
| using GenericApp.Common.Models;  using System.Collections.Generic;  namespace GenericApp.Prism.Helpers  {  public interface ICombosHelper  {  IEnumerable<ElementsList> GetCountries();  }  } |  |

Luego creamos la implementación **CombosHelper**

|  |  |
| --- | --- |
| **CombosHelper** | **Comentarios** |
| using GenericApp.Common.Models;  using System.Collections.Generic;  namespace GenericApp.Prism.Helpers  {  public class CombosHelper : ICombosHelper  {  public IEnumerable<ElementsList> GetCountries()  {  List<ElementsList> paymentMethods = new List<ElementsList>  {  new ElementsList { Id = 1, Name = "Opción 1" },  new ElementsList { Id = 2, Name = "Opción 2" },  new ElementsList { Id = 3, Name = "Opción 3" }  };  return paymentMethods;  }  }  } |  |

Adicionamos la inyección del servicio creado en **App.xaml.cs**:

|  |  |
| --- | --- |
| **App.xaml.cs** | **Comentarios** |
| protected override void RegisterTypes(IContainerRegistry containerRegistry)  {  containerRegistry.RegisterSingleton<IAppInfo, AppInfoImplementation>();  containerRegistry.Register<IApiService, ApiService>();  containerRegistry.Register<IFilesHelper, FilesHelper>();  containerRegistry.Register<IRegexHelper, RegexHelper>();  containerRegistry.Register<ICombosHelper, CombosHelper>();  …… |  |

# ItemViewModels

En el Proyecto **Prism** creamos la carpeta **ItemVIewModels**

## Clase MenuItemViewModel

En la carpeta **ItemVIewModels** creamos la clase **MenuItemViewModel**:

|  |  |
| --- | --- |
| **MenuItemViewModel** | **Comentarios** |
|  |  |

## Clase ProductItemViewModel

En la carpeta **ItemVIewModels** creamos la clase **ProductItemViewModel**:

|  |  |
| --- | --- |
| **ProductItemViewModel** | **Comentarios** |
| using Newtonsoft.Json;  using GenericApp.Common.Helpers;  using GenericApp.Common.Responses;  using GenericApp.Prism.Views;  using Prism.Commands;  using Prism.Navigation;  namespace GenericApp.Prism.ItemViewModels  {  public class ProductItemViewModel : ProductResponse  {  private readonly INavigationService \_navigationService;  private DelegateCommand \_selectProductCommand;  public float Quantity { get; set; }  public string Remarks { get; set; }  public decimal Value => (decimal)Quantity \* Price;  public ProductItemViewModel(INavigationService navigationService)  {  \_navigationService = navigationService;  }  public DelegateCommand SelectProductCommand => \_selectProductCommand ?? (\_selectProductCommand = new DelegateCommand(SelectProductAsync));  private async void SelectProductAsync()  {  NavigationParameters parameters = new NavigationParameters  {  { "product", this }  };  Settings.Product = JsonConvert.SerializeObject(this);  await \_navigationService.NavigateAsync(nameof(ProductsPage), parameters);  }  }  } |  |

# Recover Password

## RecoverPasswordPage

Dentro de la carpeta **GenericApp.Prism /Views** creamos la **RecoverPasswordPage**

|  |  |
| --- | --- |
| **RecoverPasswordPage** | **Comentarios** |
| <?xml version="1.0" encoding="utf-8" ?>  <ContentPage xmlns="http://xamarin.com/schemas/2014/forms"  xmlns:x="http://schemas.microsoft.com/winfx/2009/xaml"  xmlns:prism="http://prismlibrary.com"  prism:ViewModelLocator.AutowireViewModel="True"  xmlns:ios="clr-namespace:Xamarin.Forms.PlatformConfiguration.iOSSpecific;assembly=Xamarin.Forms.Core"  ios:Page.UseSafeArea="true"  xmlns:busyindicator="clr-namespace:Syncfusion.SfBusyIndicator.XForms;assembly=Syncfusion.SfBusyIndicator.XForms"  xmlns:inputLayout="clr-namespace:Syncfusion.XForms.TextInputLayout;assembly=Syncfusion.Core.XForms"  x:Class="GenericApp.Prism.Views.RecoverPasswordPage"  BackgroundColor="{StaticResource ColorBackground}"  Title="{Binding Title}">  <AbsoluteLayout>  <StackLayout AbsoluteLayout.LayoutBounds="0,0,1,1"  AbsoluteLayout.LayoutFlags="All"  Padding="5">  <ScrollView>  <StackLayout Spacing="0">  <inputLayout:SfTextInputLayout Hint="Email"  ContainerType="Outlined">  <Entry Placeholder="Ingrese EMail..."  Keyboard="Email"  Text="{Binding Email}" />  </inputLayout:SfTextInputLayout>  </StackLayout>  </ScrollView>  <Button Command="{Binding RecoverCommand}"  IsEnabled="{Binding IsEnabled}"  Text="Recuperar Password"  VerticalOptions="EndAndExpand"/>  </StackLayout>  <busyindicator:SfBusyIndicator AnimationType="Gear"  AbsoluteLayout.LayoutBounds=".5,.5,.5,.5"  AbsoluteLayout.LayoutFlags="All"  BackgroundColor="Transparent"  HorizontalOptions="Center"  TextColor="Blue"  IsBusy="{Binding IsRunning}"  Title="Grabando..."  VerticalOptions="Center"  ViewBoxWidth="80"  ViewBoxHeight="80" />  </AbsoluteLayout>  </ContentPage> |  |

## RecoverPasswordPageViewModel

Modificamos la **RecoverPasswordPageViewModel**

|  |  |
| --- | --- |
| **RecoverPasswordPageViewModel** | **Comentarios** |
| using GenericApp.Common.Requests;  using GenericApp.Common.Responses;  using GenericApp.Common.Services;  using GenericApp.Prism.Helpers;  using Prism.Commands;  using Prism.Navigation;  using System.Threading.Tasks;  using Xamarin.Essentials;  namespace GenericApp.Prism.ViewModels  {  public class RecoverPasswordPageViewModel : ViewModelBase  {  private readonly INavigationService \_navigationService;  private readonly IApiService \_apiService;  private readonly IRegexHelper \_regexHelper;  private bool \_isRunning;  private bool \_isEnabled;  private DelegateCommand \_recoverCommand;  private string \_email;  public RecoverPasswordPageViewModel(  INavigationService navigationService,  IApiService apiService,  IRegexHelper regexHelper)  : base(navigationService)  {  \_navigationService = navigationService;  \_apiService = apiService;  \_regexHelper = regexHelper;  Title = "Recuperar Password";  IsEnabled = true;  }  public DelegateCommand RecoverCommand => \_recoverCommand ?? (\_recoverCommand = new DelegateCommand(RecoverAsync));  public string Email  {  get => \_email;  set => SetProperty(ref \_email, value);  }  public bool IsRunning  {  get => \_isRunning;  set => SetProperty(ref \_isRunning, value);  }  public bool IsEnabled  {  get => \_isEnabled;  set => SetProperty(ref \_isEnabled, value);  }  public override void OnNavigatedTo(INavigationParameters parameters)  {  base.OnNavigatedTo(parameters);  if (parameters.ContainsKey("email"))  {  Email = parameters.GetValue<string>("email");  }  }  private async void RecoverAsync()  {  bool isValid = await ValidateData();  if (!isValid)  {  return;  }  IsRunning = true;  IsEnabled = false;  if (Connectivity.NetworkAccess != NetworkAccess.Internet)  {  IsRunning = false;  IsEnabled = true;  await App.Current.MainPage.DisplayAlert("Error", "Error de connexión", "Aceptar");  return;  }  EmailRequest request = new EmailRequest { Email = Email };  string url = App.Current.Resources["UrlAPI"].ToString();  Response response = await \_apiService.RecoverPasswordAsync(url, "api", "/Account/RecoverPassword", request);  IsRunning = false;  IsEnabled = true;  if (!response.IsSuccess)  {  if (response.Message == "Error001")  {  await App.Current.MainPage.DisplayAlert("Error", "El Usuario no existe", "Aceptar");  }  else  {  await App.Current.MainPage.DisplayAlert("Error", response.Message, "Aceptar");  }  return;  }  await App.Current.MainPage.DisplayAlert("Ok", "Se ha establecido el nuevo password con éxito.", "Aceptar");  await \_navigationService.GoBackAsync();  }  private async Task<bool> ValidateData()  {  if (string.IsNullOrEmpty(Email) || !\_regexHelper.IsValidEmail(Email))  {  await App.Current.MainPage.DisplayAlert("Error", "Email incorrecto", "Aceptar");  return false;  }  return true;  }  }  } |  |

# Registro de Usuario

## MainActivity

Modificamos el **MainActivity**

|  |  |
| --- | --- |
| **MainActivity** | **Comentarios** |
| using Android.App;  using Android.Content.PM;  using Android.OS;  using Plugin.Permissions;  using Prism;  using Prism.Ioc;  using Syncfusion.SfBusyIndicator.XForms.Droid;  namespace GenericApp.Prism.Droid  {  [Activity(Theme = "@style/MainTheme",  ConfigurationChanges = ConfigChanges.ScreenSize | ConfigChanges.Orientation | ConfigChanges.UiMode | ConfigChanges.ScreenLayout | ConfigChanges.SmallestScreenSize)]  public class MainActivity : global::Xamarin.Forms.Platform.Android.FormsAppCompatActivity  {  protected override void OnCreate(Bundle savedInstanceState)  {  TabLayoutResource = Resource.Layout.Tabbar;  ToolbarResource = Resource.Layout.Toolbar;  base.OnCreate(savedInstanceState);  global::Xamarin.Forms.Forms.Init(this, savedInstanceState);  new SfBusyIndicatorRenderer();  FFImageLoading.Forms.Platform.CachedImageRenderer.Init(true);  LoadApplication(new App(new AndroidInitializer()));  }  public override void OnRequestPermissionsResult(int requestCode, string[] permissions, Android.Content.PM.Permission[] grantResults)  {  Xamarin.Essentials.Platform.OnRequestPermissionsResult(requestCode, permissions, grantResults);  PermissionsImplementation.Current.OnRequestPermissionsResult(requestCode, permissions, grantResults);  base.OnRequestPermissionsResult(requestCode, permissions, grantResults);  }  }  public class AndroidInitializer : IPlatformInitializer  {  public void RegisterTypes(IContainerRegistry containerRegistry)  {  // Register any platform specific implementations  }  }  } |  |

## AndroidManifest

Modificamos el **AndroidManifest**:

|  |  |
| --- | --- |
| **AndroidManifest** | **Comentarios** |
| <?xml version="1.0" encoding="utf-8"?>  <manifest xmlns:android="http://schemas.android.com/apk/res/android" android:versionCode="1" android:versionName="1.0" package="com.companyname.appname" android:installLocation="auto">  <uses-sdk android:minSdkVersion="21" android:targetSdkVersion="29" />  <uses-permission android:name="android.permission.INTERNET" />  <uses-permission android:name="android.permission.ACCESS\_NETWORK\_STATE" />  <uses-permission android:name="android.permission.ACCESS\_WIFI\_STATE" />  <uses-permission android:name="android.permission.CAMERA" />  <uses-permission android:name="android.permission.WRITE\_EXTERNAL\_STORAGE" />  <uses-permission android:name="android.permission.READ\_EXTERNAL\_STORAGE" />  <uses-permission android:name="android.permission.ACCESS\_MOCK\_LOCATION" />  <uses-permission android:name="android.permission.ACCESS\_LOCATION\_EXTRA\_COMMANDS" />  <uses-permission android:name="android.permission.ACCESS\_FINE\_LOCATION" />  <uses-permission android:name="android.permission.ACCESS\_COARSE\_LOCATION" />  <application android:label="@string/app\_name" android:icon="@drawable/ic\_launcher">  <provider android:name="android.support.v4.content.FileProvider"  android:authorities="${applicationId}.fileprovider"  android:exported="false"  android:grantUriPermissions="true">  <meta-data android:name="android.support.FILE\_PROVIDER\_PATHS"  android:resource="@xml/file\_paths"></meta-data>  </provider>  <meta-data  android:name="com.google.android.maps.v2.API\_KEY"  android:value="AIzaSyAtxvXVhbzV9OTwZh8UxVsW2A58WYf-Btc" />  <uses-library android:name="org.apache.http.legacy" android:required="false" />  </application>  </manifest> |  |

## Carpeta xml y archivo file\_paths.xml para sacar fotos

Adicionamos la carpeta **xml** dentro de **Resources** y en esta, adicionamos el **file\_paths.xml**:

|  |  |
| --- | --- |
| **file\_paths.xml** | **Comentarios** |
| <?xml version="1.0" encoding="UTF-8" ?>  <paths xmlns:android="http://schemas.android.com/apk/res/android">  <external-files-path name="my\_images" path="Pictures" />  <external-files-path name="my\_movies" path="Movies" />  </paths> |  |

## Imagen NoUser

En la carpeta Resources/Drawable ponemos el archivo **nouser.png**

## RegisterPage

Dentro de la carpeta **GenericApp.Prism /Views** creamos la **RegisterPage**

|  |  |
| --- | --- |
| **RegisterPage** | **Comentarios** |
| <?xml version="1.0" encoding="utf-8" ?>  <ContentPage xmlns="http://xamarin.com/schemas/2014/forms"  xmlns:x="http://schemas.microsoft.com/winfx/2009/xaml"  xmlns:prism="http://prismlibrary.com"  prism:ViewModelLocator.AutowireViewModel="True"  xmlns:ios="clr-namespace:Xamarin.Forms.PlatformConfiguration.iOSSpecific;assembly=Xamarin.Forms.Core"  ios:Page.UseSafeArea="true"  xmlns:ffimageloading="clr-namespace:FFImageLoading.Forms;assembly=FFImageLoading.Forms"  xmlns:fftransformations="clr-namespace:FFImageLoading.Transformations;assembly=FFImageLoading.Transformations"  xmlns:inputLayout="clr-namespace:Syncfusion.XForms.TextInputLayout;assembly=Syncfusion.Core.XForms"  x:Class="GenericApp.Prism.Views.RegisterPage"  xmlns:busyindicator="clr-namespace:Syncfusion.SfBusyIndicator.XForms;assembly=Syncfusion.SfBusyIndicator.XForms"  BackgroundColor="{StaticResource ColorBackground}"  Title="{Binding Title}">  <AbsoluteLayout>  <StackLayout AbsoluteLayout.LayoutBounds="0,0,1,1"  AbsoluteLayout.LayoutFlags="All"  Padding="5">  <ScrollView>  <StackLayout Spacing="0">  <ffimageloading:CachedImage Aspect="AspectFit"  Source="{Binding Image}"  CacheDuration= "50"  HeightRequest="150"  Margin="5"  RetryCount= "3"  RetryDelay= "600">  <ffimageloading:CachedImage.Transformations>  <fftransformations:CircleTransformation />  </ffimageloading:CachedImage.Transformations>  <ffimageloading:CachedImage.GestureRecognizers>  <TapGestureRecognizer Command="{Binding ChangeImageCommand}"/>  </ffimageloading:CachedImage.GestureRecognizers>  </ffimageloading:CachedImage>  <inputLayout:SfTextInputLayout Hint="Email"  ContainerType="Outlined">  <Entry Placeholder="Ingrese EMail..."  Keyboard="Email"  Text="{Binding User.Email}" />  </inputLayout:SfTextInputLayout>  <inputLayout:SfTextInputLayout Hint="Documento"  ContainerType="Outlined">  <Entry Placeholder="Ingrese Documento..."  Text="{Binding User.Document}" />  </inputLayout:SfTextInputLayout>  <inputLayout:SfTextInputLayout Hint="Nombre"  ContainerType="Outlined">  <Entry Placeholder="Ingrese Nombre..."  Text="{Binding User.FirstName}" />  </inputLayout:SfTextInputLayout>  <inputLayout:SfTextInputLayout Hint="Apellido"  ContainerType="Outlined">  <Entry Placeholder="Ingrese Apellido..."  Text="{Binding User.LastName}" />  </inputLayout:SfTextInputLayout>  <inputLayout:SfTextInputLayout Hint="País"  ContainerType="Outlined">  <Picker ItemDisplayBinding="{Binding Name}"  ItemsSource="{Binding Countries}"  SelectedItem="{Binding Country}"  Title="Seleccione País..."/>  </inputLayout:SfTextInputLayout>  <inputLayout:SfTextInputLayout Hint="Provincia"  ContainerType="Outlined">  <Picker ItemDisplayBinding="{Binding Name}"  ItemsSource="{Binding Departments}"  SelectedItem="{Binding Department}"  Title="Seleccione Provincia...}"/>  </inputLayout:SfTextInputLayout>  <inputLayout:SfTextInputLayout Hint="Ciudad"  ContainerType="Outlined">  <Picker ItemDisplayBinding="{Binding Name}"  ItemsSource="{Binding Cities}"  SelectedItem="{Binding City}"  Title="Seleccione Ciudad..."/>  </inputLayout:SfTextInputLayout>  <inputLayout:SfTextInputLayout Hint="Dirección"  ContainerType="Outlined">  <Entry Placeholder="Ingrese Dirección..."  Text="{Binding User.Address}" />  </inputLayout:SfTextInputLayout>  <inputLayout:SfTextInputLayout Hint="Teléfono"  ContainerType="Outlined">  <Entry Placeholder="Ingrese Teléfono..."  Keyboard="Telephone"  Text="{Binding User.Phone}" />  </inputLayout:SfTextInputLayout>  <inputLayout:SfTextInputLayout Hint="País"  ContainerType="Outlined">  <Picker ItemDisplayBinding="{Binding Name}"  ItemsSource="{Binding Countries}"  SelectedItem="{Binding CountryTeam}"  Title="Seleccione País..."/>  </inputLayout:SfTextInputLayout>  <inputLayout:SfTextInputLayout Hint="Equipo"  ContainerType="Outlined">  <Picker ItemDisplayBinding="{Binding Name}"  ItemsSource="{Binding Teams}"  SelectedItem="{Binding Team}"  Title="Seleccione Equipo...}"/>  </inputLayout:SfTextInputLayout>    <inputLayout:SfTextInputLayout Hint="Password"  EnablePasswordVisibilityToggle="true"  ContainerType="Outlined">  <Entry Placeholder="Ingrese Password..."  IsPassword="True"  Text="{Binding User.Password}" />  </inputLayout:SfTextInputLayout>  <inputLayout:SfTextInputLayout Hint="Confirme el Password"  EnablePasswordVisibilityToggle="true"  ContainerType="Outlined">  <Entry Placeholder="Ingrese Conf. de Password..."  IsPassword="True"  Text="{Binding User.PasswordConfirm}" />  </inputLayout:SfTextInputLayout>  </StackLayout>  </ScrollView>  <Button Command="{Binding RegisterCommand}"  IsEnabled="{Binding IsEnabled}"  Text="Register"  VerticalOptions="EndAndExpand"/>  </StackLayout>  <busyindicator:SfBusyIndicator AnimationType="Gear"  AbsoluteLayout.LayoutBounds=".5,.5,.5,.5"  AbsoluteLayout.LayoutFlags="All"  BackgroundColor="Transparent"  HorizontalOptions="Center"  TextColor="Blue"  IsBusy="{Binding IsRunning}"  Title="Grabando..."  VerticalOptions="Center"  ViewBoxWidth="80"  ViewBoxHeight="80" />  </AbsoluteLayout>  </ContentPage> |  |

## RegisterPageViewModel

Modificamos la **RegisterPageViewModel**

|  |  |
| --- | --- |
| **RegisterPageViewModel** | **Comentarios** |
| using GenericApp.Common.Helpers;  using GenericApp.Common.Requests;  using GenericApp.Common.Responses;  using GenericApp.Common.Services;  using GenericApp.Prism.Helpers;  using Plugin.Media;  using Plugin.Media.Abstractions;  using Prism.Commands;  using Prism.Navigation;  using System.Collections.Generic;  using System.Collections.ObjectModel;  using System.Linq;  using System.Threading.Tasks;  using Xamarin.Essentials;  using Xamarin.Forms;  namespace GenericApp.Prism.ViewModels  {  public class RegisterPageViewModel : ViewModelBase  {  private readonly INavigationService \_navigationService;  private readonly IRegexHelper \_regexHelper;  private readonly IApiService \_apiService;  private readonly IFilesHelper \_filesHelper;  private ImageSource \_image;  private UserRequest \_user;  private CityResponse \_city;  private ObservableCollection<CityResponse> \_cities;  private DepartmentResponse \_department;  private ObservableCollection<DepartmentResponse> \_departments;  private TeamResponse \_team;  private ObservableCollection<TeamResponse> \_teams;  private CountryResponse \_country;  private CountryResponse \_countryTeam;  private ObservableCollection<CountryResponse> \_countries;  private bool \_isRunning;  private bool \_isEnabled;  private DelegateCommand \_registerCommand;  private MediaFile \_file;  private DelegateCommand \_changeImageCommand;  public DelegateCommand ChangeImageCommand => \_changeImageCommand ?? (\_changeImageCommand = new DelegateCommand(ChangeImageAsync));  public RegisterPageViewModel(  INavigationService navigationService,  IRegexHelper regexHelper,  IApiService apiService,  IFilesHelper filesHelper)  : base(navigationService)  {  \_navigationService = navigationService;  \_regexHelper = regexHelper;  \_apiService = apiService;  \_filesHelper = filesHelper;  Title = "Register";  Image = App.Current.Resources["UrlNoImage"].ToString();  IsEnabled = true;  User = new UserRequest();  LoadCountriesAsync();  }  public DelegateCommand RegisterCommand => \_registerCommand ?? (\_registerCommand = new DelegateCommand(RegisterAsync));  public ImageSource Image  {  get => \_image;  set => SetProperty(ref \_image, value);  }  public UserRequest User  {  get => \_user;  set => SetProperty(ref \_user, value);  }  public CountryResponse Country  {  get => \_country;  set  {  Departments = value != null ? new ObservableCollection<DepartmentResponse>(value.Departments) : null;  Cities = new ObservableCollection<CityResponse>();  Department = null;  City = null;  SetProperty(ref \_country, value);  }  }  public CountryResponse CountryTeam  {  get => \_countryTeam;  set  {  //Teams = value != null ? new ObservableCollection<TeamResponse>(value.Teams) : null;  Departments = value != null ? new ObservableCollection<DepartmentResponse>(value.Departments) : null;  Cities = new ObservableCollection<CityResponse>();  Team = null;  Department = null;  City = null;  SetProperty(ref \_countryTeam, value);  }  }  public ObservableCollection<CountryResponse> Countries  {  get => \_countries;  set => SetProperty(ref \_countries, value);  }  public DepartmentResponse Department  {  get => \_department;  set  {  Cities = value != null ? new ObservableCollection<CityResponse>(value.Cities) : null;  City = null;  SetProperty(ref \_department, value);  }  }  public TeamResponse Team  {  get => \_team;  set  {  SetProperty(ref \_team, value);  }  }  public ObservableCollection<DepartmentResponse> Departments  {  get => \_departments;  set => SetProperty(ref \_departments, value);  }  public CityResponse City  {  get => \_city;  set => SetProperty(ref \_city, value);  }  public ObservableCollection<CityResponse> Cities  {  get => \_cities;  set => SetProperty(ref \_cities, value);  }  public bool IsRunning  {  get => \_isRunning;  set => SetProperty(ref \_isRunning, value);  }  public bool IsEnabled  {  get => \_isEnabled;  set => SetProperty(ref \_isEnabled, value);  }  private async void LoadCountriesAsync()  {  IsRunning = true;  IsEnabled = false;  if (Connectivity.NetworkAccess != NetworkAccess.Internet)  {  IsRunning = false;  IsEnabled = true;  await App.Current.MainPage.DisplayAlert("Error", "Error de Conexión", "Aceptar");  return;  }  string url = App.Current.Resources["UrlAPI"].ToString();  Response response = await \_apiService.GetListAsync<CountryResponse>(url, "api", "/Countries");  IsRunning = false;  IsEnabled = true;  if (!response.IsSuccess)  {  await App.Current.MainPage.DisplayAlert("Error", response.Message, "Aceptar");  return;  }  List<CountryResponse> list = (List<CountryResponse>)response.Result;  Countries = new ObservableCollection<CountryResponse>(list.OrderBy(c => c.Name));  }  private async void RegisterAsync()  {  bool isValid = await ValidateDataAsync();  if (!isValid)  {  return;  }  IsRunning = true;  IsEnabled = false;  if (Connectivity.NetworkAccess != NetworkAccess.Internet)  {  IsRunning = false;  IsEnabled = true;  await App.Current.MainPage.DisplayAlert("Error", "ConnectionError", "Aceptar");  return;  }  byte[] imageArray = null;  if (\_file != null)  {  imageArray = \_filesHelper.ReadFully(\_file.GetStream());  }  User.PictureArray = imageArray;  string url = App.Current.Resources["UrlAPI"].ToString();  User.CityId = City.Id;  Response response = await \_apiService.RegisterUserAsync(url, "api", "/Account/Register", User);  IsRunning = false;  IsEnabled = true;  if (!response.IsSuccess)  {  if (response.Message == "Error003")  {  await App.Current.MainPage.DisplayAlert("Error", "Este usuario ya existe", "Aceptar");  }  else if (response.Message == "Error004")  {  await App.Current.MainPage.DisplayAlert("Error", "La ciudad no es válida", "Aceptar");  }  else  {  await App.Current.MainPage.DisplayAlert("Error", response.Message, "Aceptar");  }  return;  }  await App.Current.MainPage.DisplayAlert("Ok", "El Registro fue correcto", "Aceptar");  await \_navigationService.GoBackAsync();  }  private async Task<bool> ValidateDataAsync()  {  if (string.IsNullOrEmpty(User.Document))  {  await App.Current.MainPage.DisplayAlert("Error", "Ingrese Documento", "Aceptar");  return false;  }  if (string.IsNullOrEmpty(User.FirstName))  {  await App.Current.MainPage.DisplayAlert("Error", "Ingrese un Nombre", "Aceptar");  return false;  }  if (string.IsNullOrEmpty(User.LastName))  {  await App.Current.MainPage.DisplayAlert("Error", "Ingrese un Apellido", "Aceptar");  return false;  }  if (string.IsNullOrEmpty(User.Address))  {  await App.Current.MainPage.DisplayAlert("Error", "Ingrese una Dirección", "Aceptar");  return false;  }  if (string.IsNullOrEmpty(User.Email) || !\_regexHelper.IsValidEmail(User.Email))  {  await App.Current.MainPage.DisplayAlert("Error", "Ingrese un EMail", "Aceptar");  return false;  }  if (string.IsNullOrEmpty(User.Phone))  {  await App.Current.MainPage.DisplayAlert("Error", "Ingrese un Teléfono", "Aceptar");  return false;  }  if (Country == null)  {  await App.Current.MainPage.DisplayAlert("Error", "Seleccione un país", "Aceptar");  return false;  }  if (Department == null)  {  await App.Current.MainPage.DisplayAlert("Error", "Seleccione un departamento", "Aceptar");  return false;  }  if (City == null)  {  await App.Current.MainPage.DisplayAlert("Error", "Seleccione una ciudad", "Aceptar");  return false;  }  if (string.IsNullOrEmpty(User.Password) || User.Password?.Length < 6)  {  await App.Current.MainPage.DisplayAlert("Error", "Ingrese un Password", "Aceptar");  return false;  }  if (string.IsNullOrEmpty(User.PasswordConfirm))  {  await App.Current.MainPage.DisplayAlert("Error", "Ingrese una Conf. de Password", "Aceptar");  return false;  }  if (User.Password != User.PasswordConfirm)  {  await App.Current.MainPage.DisplayAlert("Error", "Password y su Confirmación deben ser iguales", "Aceptar");  return false;  }  return true;  }  private async void ChangeImageAsync()  {  await CrossMedia.Current.Initialize();  string source = await Application.Current.MainPage.DisplayActionSheet(  "De donde quiere tomar la foto?",  "Cancelar",  null,  "Galería",  "Cámara");  if (source == "Cancelar")  {  \_file = null;  return;  }  if (source == "Cámara")  {  if (!CrossMedia.Current.IsCameraAvailable)  {  await App.Current.MainPage.DisplayAlert("Error", "La cámara no está disponible", "Aceptar");  return;  }  \_file = await CrossMedia.Current.TakePhotoAsync(  new StoreCameraMediaOptions  {  Directory = "Sample",  Name = "test.jpg",  PhotoSize = PhotoSize.Small,  }  );  }  else  {  if (!CrossMedia.Current.IsPickPhotoSupported)  {  await App.Current.MainPage.DisplayAlert("Error", "La Galería no está disponible", "Aceptar");  return;  }  \_file = await CrossMedia.Current.PickPhotoAsync();  }  if (\_file != null)  {  Image = ImageSource.FromStream(() =>  {  System.IO.Stream stream = \_file.GetStream();  return stream;  });  }  }  }  } |  |

# Cambiar Password

## ChagePasswordPage

Dentro de la carpeta **GenericApp.Prism/Views** creamos la **ChangePasswordPage**

|  |  |
| --- | --- |
| **ChangePasswordPage** | **Comentarios** |
| <?xml version="1.0" encoding="utf-8" ?>  <ContentPage xmlns="http://xamarin.com/schemas/2014/forms"  xmlns:x="http://schemas.microsoft.com/winfx/2009/xaml"  xmlns:prism="http://prismlibrary.com"  prism:ViewModelLocator.AutowireViewModel="True"  xmlns:ios="clr-namespace:Xamarin.Forms.PlatformConfiguration.iOSSpecific;assembly=Xamarin.Forms.Core"  ios:Page.UseSafeArea="true"  xmlns:busyindicator="clr-namespace:Syncfusion.SfBusyIndicator.XForms;assembly=Syncfusion.SfBusyIndicator.XForms"  xmlns:inputLayout="clr-namespace:Syncfusion.XForms.TextInputLayout;assembly=Syncfusion.Core.XForms"  x:Class="GenericApp.Prism.Views.ChangePasswordPage"  xmlns:i18n="clr-namespace:GenericApp.Prism.Helpers"  BackgroundColor="{StaticResource ColorBackground}"  Title="{Binding Title}">  <AbsoluteLayout>  <StackLayout AbsoluteLayout.LayoutBounds="0,0,1,1"  AbsoluteLayout.LayoutFlags="All"  Padding="5">  <ScrollView>  <StackLayout Spacing="0">  <inputLayout:SfTextInputLayout Hint="Password actual"  EnablePasswordVisibilityToggle="true"  ContainerType="Outlined">  <Entry Placeholder="Password actual..."  IsPassword="True"  Text="{Binding CurrentPassword}" />  </inputLayout:SfTextInputLayout>  <inputLayout:SfTextInputLayout Hint="Nuevo Password"  EnablePasswordVisibilityToggle="true"  ContainerType="Outlined">  <Entry Placeholder="Nuevo Password..."  IsPassword="True"  Text="{Binding NewPassword}" />  </inputLayout:SfTextInputLayout>  <inputLayout:SfTextInputLayout Hint="Confirme Nuevo Password"  EnablePasswordVisibilityToggle="true"  ContainerType="Outlined">  <Entry Placeholder="Confirme Nuevo Password..."  IsPassword="True"  Text="{Binding PasswordConfirm}" />  </inputLayout:SfTextInputLayout>  </StackLayout>  </ScrollView>  <Button Command="{Binding ChangePasswordCommand}"  IsEnabled="{Binding IsEnabled}"  Text="Cambiar Password"  VerticalOptions="EndAndExpand"/>  </StackLayout>  <busyindicator:SfBusyIndicator AnimationType="Gear"  AbsoluteLayout.LayoutBounds=".5,.5,.5,.5"  AbsoluteLayout.LayoutFlags="All"  BackgroundColor="Transparent"  HorizontalOptions="Center"  TextColor="Blue"  IsBusy="{Binding IsRunning}"  Title="Grabando..."  VerticalOptions="Center"  ViewBoxWidth="80"  ViewBoxHeight="80" />  </AbsoluteLayout>  </ContentPage> |  |

## ChangePasswordPageViewModel

Modificamos la **ChangePasswordPageViewModel**

|  |  |
| --- | --- |
| **ChangePasswordPageViewModel** | **Comentarios** |
| using GenericApp.Common.Helpers;  using GenericApp.Common.Requests;  using GenericApp.Common.Responses;  using GenericApp.Common.Services;  using Newtonsoft.Json;  using Prism.Commands;  using Prism.Navigation;  using System.Threading.Tasks;  using Xamarin.Essentials;  namespace GenericApp.Prism.ViewModels  {  public class ChangePasswordPageViewModel : ViewModelBase  {  private readonly INavigationService \_navigationService;  private readonly IApiService \_apiService;  private bool \_isRunning;  private bool \_isEnabled;  private DelegateCommand \_changePasswordCommand;  public ChangePasswordPageViewModel(INavigationService navigationService, IApiService apiService)  : base(navigationService)  {  \_navigationService = navigationService;  \_apiService = apiService;  IsEnabled = true;  Title = "Cambiar Password";  }  public DelegateCommand ChangePasswordCommand => \_changePasswordCommand ?? (\_changePasswordCommand = new DelegateCommand(ChangePasswordAsync));  public string CurrentPassword { get; set; }  public string NewPassword { get; set; }  public string PasswordConfirm { get; set; }  public bool IsRunning  {  get => \_isRunning;  set => SetProperty(ref \_isRunning, value);  }  public bool IsEnabled  {  get => \_isEnabled;  set => SetProperty(ref \_isEnabled, value);  }  private async void ChangePasswordAsync()  {  var isValid = await ValidateDataAsync();  if (!isValid)  {  return;  }  IsRunning = true;  IsEnabled = false;  if (Connectivity.NetworkAccess != NetworkAccess.Internet)  {  IsRunning = false;  IsEnabled = true;  await App.Current.MainPage.DisplayAlert("Error", "Error de conexión", "Aceptar");  return;  }  ChangePasswordRequest request = new ChangePasswordRequest  {  NewPassword = NewPassword,  OldPassword = CurrentPassword,  };  TokenResponse token = JsonConvert.DeserializeObject<TokenResponse>(Settings.Token);  string url = App.Current.Resources["UrlAPI"].ToString();  Response response = await \_apiService.ChangePasswordAsync(url, "api", "/Account/ChangePassword", request, token.Token);  IsRunning = false;  IsEnabled = true;  if (!response.IsSuccess)  {  if (response.Message == "Error001")  {  await App.Current.MainPage.DisplayAlert("Error", "El usuario no existe", "Aceptar");  }  else if (response.Message == "Error005")  {  await App.Current.MainPage.DisplayAlert("Error", "El password actual es incorrecto", "Aceptar");  }  else  {  await App.Current.MainPage.DisplayAlert("Error", response.Message, "Aceptar");  }  return;  }  await App.Current.MainPage.DisplayAlert("Ok", "El Password fue cambiado con éxito!!", "Aceptar");  await \_navigationService.GoBackAsync();  }  private async Task<bool> ValidateDataAsync()  {  if (string.IsNullOrEmpty(CurrentPassword))  {  await App.Current.MainPage.DisplayAlert("Error", "Ingrese Password actual", "Aceptar");  return false;  }  if (string.IsNullOrEmpty(NewPassword) || NewPassword?.Length < 6)  {  await App.Current.MainPage.DisplayAlert("Error", "Ingrese Nuevo Password", "Aceptar");  return false;  }  if (string.IsNullOrEmpty(PasswordConfirm))  {  await App.Current.MainPage.DisplayAlert("Error", "Ingrese Confirmación de Password", "Aceptar");  return false;  }  if (NewPassword != PasswordConfirm)  {  await App.Current.MainPage.DisplayAlert("Error", "El Nuevo Password y su Confirmación no son iguales", "Aceptar");  return false;  }  return true;  }  }  } |  |

# Modificar Usuario

## ModifyUserPage

Dentro de la carpeta **GenericApp.Prism/Views** creamos la **ModifyUserPage**

|  |  |
| --- | --- |
| **ModifyUserPage** | **Comentarios** |
| <?xml version="1.0" encoding="utf-8" ?>  <ContentPage xmlns="http://xamarin.com/schemas/2014/forms"  xmlns:x="http://schemas.microsoft.com/winfx/2009/xaml"  xmlns:prism="http://prismlibrary.com"  prism:ViewModelLocator.AutowireViewModel="True"  xmlns:ios="clr-namespace:Xamarin.Forms.PlatformConfiguration.iOSSpecific;assembly=Xamarin.Forms.Core"  ios:Page.UseSafeArea="true"  xmlns:ffimageloading="clr-namespace:FFImageLoading.Forms;assembly=FFImageLoading.Forms"  xmlns:fftransformations="clr-namespace:FFImageLoading.Transformations;assembly=FFImageLoading.Transformations"  xmlns:inputLayout="clr-namespace:Syncfusion.XForms.TextInputLayout;assembly=Syncfusion.Core.XForms"  xmlns:busyindicator="clr-namespace:Syncfusion.SfBusyIndicator.XForms;assembly=Syncfusion.SfBusyIndicator.XForms"  x:Class="GenericApp.Prism.Views.ModifyUserPage"  BackgroundColor="{StaticResource ColorBackground}"  Title="{Binding Title}">  <AbsoluteLayout>  <StackLayout AbsoluteLayout.LayoutBounds="0,0,1,1"  AbsoluteLayout.LayoutFlags="All"  Padding="5">  <ScrollView>  <StackLayout Spacing="0">  <ffimageloading:CachedImage Aspect="AspectFit"  Source="{Binding Image}"  CacheDuration= "50"  HeightRequest="150"  Margin="5"  RetryCount= "3"  RetryDelay= "600">  <ffimageloading:CachedImage.Transformations>  <fftransformations:CircleTransformation />  </ffimageloading:CachedImage.Transformations>  <ffimageloading:CachedImage.GestureRecognizers>  <TapGestureRecognizer Command="{Binding ChangeImageCommand}"/>  </ffimageloading:CachedImage.GestureRecognizers>  </ffimageloading:CachedImage>  </StackLayout>  </ScrollView>  <StackLayout Orientation="Horizontal"  VerticalOptions="EndAndExpand">  <Button Command="{Binding SaveCommand}"  IsEnabled="{Binding IsEnabled}"  Text="Save"/>  <Button Command="{Binding ChangePasswordCommand}"  IsEnabled="{Binding IsEnabled}"  Style="{StaticResource SecondaryButton}"  Text="Change Password"/>  </StackLayout>  </StackLayout>  <busyindicator:SfBusyIndicator AnimationType="Gear"  AbsoluteLayout.LayoutBounds=".5,.5,.5,.5"  AbsoluteLayout.LayoutFlags="All"  BackgroundColor="Transparent"  HorizontalOptions="Center"  TextColor="Blue"  IsBusy="{Binding IsRunning}"  Title="Saving..."  VerticalOptions="Center"  ViewBoxWidth="80"  ViewBoxHeight="80" />  </AbsoluteLayout>  </ContentPage> |  |

## ModifyUserPageViewModel

Modificamos la **ModifyUserPageViewModel**

|  |  |
| --- | --- |
| **ModifyUserPageViewModel** | **Comentarios** |
| using Newtonsoft.Json;  using GenericApp.Common.Helpers;  using GenericApp.Common.Requests;  using GenericApp.Common.Responses;  using GenericApp.Common.Services;  using Plugin.Media;  using Plugin.Media.Abstractions;  using Prism.Commands;  using Prism.Navigation;  using System.Collections.Generic;  using System.Collections.ObjectModel;  using System.Linq;  using System.Threading.Tasks;  using Xamarin.Essentials;  using Xamarin.Forms;  using ImageSource = Xamarin.Forms.ImageSource;  using GenericApp.Prism.Views;  namespace GenericApp.Prism.ViewModels  {  public class ModifyUserPageViewModel : ViewModelBase  {  private readonly INavigationService \_navigationService;  private readonly IApiService \_apiService;  private readonly IFilesHelper \_filesHelper;  private ImageSource \_image;  private UserResponse \_user;  private CityResponse \_city;  private ObservableCollection<CityResponse> \_cities;  private DepartmentResponse \_department;  private ObservableCollection<DepartmentResponse> \_departments;  private CountryResponse \_country;  private ObservableCollection<CountryResponse> \_countries;  private bool \_isRunning;  private bool \_isEnabled;  private MediaFile \_file;  private DelegateCommand \_changeImageCommand;  private DelegateCommand \_saveCommand;  private DelegateCommand \_changePasswordCommand;  public ModifyUserPageViewModel(  INavigationService navigationService,  IApiService apiService,  IFilesHelper filesHelper)  : base(navigationService)  {  \_navigationService = navigationService;  \_apiService = apiService;  \_filesHelper = filesHelper;  Title = "Modificar Usuario";  IsEnabled = true;  TokenResponse token = JsonConvert.DeserializeObject<TokenResponse>(Settings.Token);  User = token.User;  Image = User.PictureFullPath;  LoadCountriesAsync();  }  public DelegateCommand ChangeImageCommand => \_changeImageCommand ??  (\_changeImageCommand = new DelegateCommand(ChangeImageAsync));  public DelegateCommand SaveCommand => \_saveCommand ??  (\_saveCommand = new DelegateCommand(SaveAsync));  public DelegateCommand ChangePasswordCommand => \_changePasswordCommand ??  (\_changePasswordCommand = new DelegateCommand(ChangePasswordAsync));  public Xamarin.Forms.ImageSource Image  {  get => \_image;  set => SetProperty(ref \_image, value);  }  public UserResponse User  {  get => \_user;  set => SetProperty(ref \_user, value);  }  public CountryResponse Country  {  get => \_country;  set  {  Departments = value != null ? new ObservableCollection<DepartmentResponse>(value.Departments) : null;  Cities = new ObservableCollection<CityResponse>();  Department = null;  City = null;  SetProperty(ref \_country, value);  }  }  public ObservableCollection<CountryResponse> Countries  {  get => \_countries;  set => SetProperty(ref \_countries, value);  }  public DepartmentResponse Department  {  get => \_department;  set  {  Cities = value != null ? new ObservableCollection<CityResponse>(value.Cities) : null;  City = null;  SetProperty(ref \_department, value);  }  }  public ObservableCollection<DepartmentResponse> Departments  {  get => \_departments;  set => SetProperty(ref \_departments, value);  }  public CityResponse City  {  get => \_city;  set => SetProperty(ref \_city, value);  }  public ObservableCollection<CityResponse> Cities  {  get => \_cities;  set => SetProperty(ref \_cities, value);  }  public bool IsRunning  {  get => \_isRunning;  set => SetProperty(ref \_isRunning, value);  }  public bool IsEnabled  {  get => \_isEnabled;  set => SetProperty(ref \_isEnabled, value);  }  private async void LoadCountriesAsync()  {  IsRunning = true;  IsEnabled = false;  if (Connectivity.NetworkAccess != NetworkAccess.Internet)  {  IsRunning = false;  IsEnabled = true;  await App.Current.MainPage.DisplayAlert(  "Error",  "Connection Error",  "Accept");  return;  }  string url = App.Current.Resources["UrlAPI"].ToString();  Response response = await \_apiService.GetListAsync<CountryResponse>(url, "api", "/Countries");  IsRunning = false;  IsEnabled = true;  if (!response.IsSuccess)  {  await App.Current.MainPage.DisplayAlert("Error", response.Message, "Aceptar");  return;  }  List<CountryResponse> list = (List<CountryResponse>)response.Result;  Countries = new ObservableCollection<CountryResponse>(list.OrderBy(c => c.Name));  LoadCurrentCountyDepartmentCity();  }  private void LoadCurrentCountyDepartmentCity()  {  Country = Countries.FirstOrDefault(c => c.Departments.FirstOrDefault(d => d.Cities.FirstOrDefault(ci => ci.Id == User.City.Id) != null) != null);  Department = Country.Departments.FirstOrDefault(d => d.Cities.FirstOrDefault(c => c.Id == User.City.Id) != null);  City = Department.Cities.FirstOrDefault(c => c.Id == User.City.Id);  }  private async void ChangeImageAsync()  {  await CrossMedia.Current.Initialize();  string source = await Application.Current.MainPage.DisplayActionSheet(  "De donde quiere tomar la foto?",  "Cancelar",  null,  "Galería",  "Cámara");  if (source == "Cancelar")  {  \_file = null;  return;  }  if (source == "Cámara")  {  if (!CrossMedia.Current.IsCameraAvailable)  {  await App.Current.MainPage.DisplayAlert("Error", "La cámara no está disponible", "Aceptar");  return;  }  \_file = await CrossMedia.Current.TakePhotoAsync(  new StoreCameraMediaOptions  {  Directory = "Sample",  Name = "test.jpg",  PhotoSize = PhotoSize.Small,  }  );  }  else  {  if (!CrossMedia.Current.IsPickPhotoSupported)  {  await App.Current.MainPage.DisplayAlert("Error", "La Galería no está disponible", "Aceptar");  return;  }  \_file = await CrossMedia.Current.PickPhotoAsync();  }  if (\_file != null)  {  Image = Xamarin.Forms.ImageSource.FromStream(() =>  {  System.IO.Stream stream = \_file.GetStream();  return stream;  });  }  }  private async void SaveAsync()  {  bool isValid = await ValidateDataAsync();  if (!isValid)  {  return;  }  IsRunning = true;  IsEnabled = false;  if (Connectivity.NetworkAccess != NetworkAccess.Internet)  {  IsRunning = false;  IsEnabled = true;  await App.Current.MainPage.DisplayAlert("Error", "Connection Error", "Accept");  return;  }  byte[] imageArray = null;  if (\_file != null)  {  imageArray = \_filesHelper.ReadFully(\_file.GetStream());  }  UserRequest request = new UserRequest  {  Address = User.Address,  CityId = City.Id,  Document = User.Document,  Email = User.Email,  FirstName = User.FirstName,  PictureArray = imageArray,  LastName = User.LastName,  Password = "123456", // Doen't matter, it's only to pass the data annotation  Phone = User.PhoneNumber,  //FavoriteTeamId  };  TokenResponse token = JsonConvert.DeserializeObject<TokenResponse>(Settings.Token);  string url = App.Current.Resources["UrlAPI"].ToString();  Response response = await \_apiService.ModifyUserAsync(url, "api", "/Account", request, token.Token);  IsRunning = false;  IsEnabled = true;  if (!response.IsSuccess)  {  if (response.Message == "Error001")  {  await App.Current.MainPage.DisplayAlert("Error", "El Usuario no existe", "Aceptar");  }  else if (response.Message == "Error004")  {  await App.Current.MainPage.DisplayAlert("Error", "La ciudad no existe", "Aceptar");  }  else  {  await App.Current.MainPage.DisplayAlert("Error", response.Message, "Aceptar");  }  return;  }  UserResponse updatedUser = (UserResponse)response.Result;  token.User = updatedUser;  Settings.Token = JsonConvert.SerializeObject(token);  GenericAppMasterDetailPageViewModel.GetInstance().LoadUser();  await App.Current.MainPage.DisplayAlert("Ok", "El Usuario fue actualizado con éxito.", "Aceptar");  }  private async Task<bool> ValidateDataAsync()  {  if (string.IsNullOrEmpty(User.Document))  {  await App.Current.MainPage.DisplayAlert("Error", "Ingrese un Documento", "Aceptar");  return false;  }  if (string.IsNullOrEmpty(User.FirstName))  {  await App.Current.MainPage.DisplayAlert("Error", "Ingrese un Nombre", "Aceptar");  return false;  }  if (string.IsNullOrEmpty(User.LastName))  {  await App.Current.MainPage.DisplayAlert("Error", "Ingrese un Apellido", "Aceptar");  return false;  }  if (string.IsNullOrEmpty(User.Address))  {  await App.Current.MainPage.DisplayAlert("Error", "Ingrese una Dirección", "Aceptar");  return false;  }  if (string.IsNullOrEmpty(User.PhoneNumber))  {  await App.Current.MainPage.DisplayAlert("Error", "Ingrese un Teléfono", "Aceptar");  return false;  }  if (Country == null)  {  await App.Current.MainPage.DisplayAlert("Error", "Seleccione un país", "Accept");  return false;  }  if (Department == null)  {  await App.Current.MainPage.DisplayAlert("Error", "Seleccione un departamento", "Aceptar");  return false;  }  if (City == null)  {  await App.Current.MainPage.DisplayAlert("Error", "Seleccione una ciudad", "Aceptar");  return false;  }  return true;  }  private async void ChangePasswordAsync()  {  await \_navigationService.NavigateAsync(nameof(ChangePasswordPage));  }  }  } |  |

# Productos

## Imagen NoImage

En la carpeta Resources/Drawable ponemos el archivo **noimage.png**

## ProductsPage

Dentro de la carpeta **GenericApp.Prism/Views** creamos la **ProductsPage**

|  |  |
| --- | --- |
| **ProductsPage** | **Comentarios** |
| <?xml version="1.0" encoding="utf-8" ?>  <ContentPage xmlns="http://xamarin.com/schemas/2014/forms"  xmlns:x="http://schemas.microsoft.com/winfx/2009/xaml"  xmlns:prism="http://prismlibrary.com"  prism:ViewModelLocator.AutowireViewModel="True"  xmlns:ffimageloading="clr-namespace:FFImageLoading.Forms;assembly=FFImageLoading.Forms"  xmlns:ios="clr-namespace:Xamarin.Forms.PlatformConfiguration.iOSSpecific;assembly=Xamarin.Forms.Core"  ios:Page.UseSafeArea="true"  xmlns:busyindicator="clr-namespace:Syncfusion.SfBusyIndicator.XForms;assembly=Syncfusion.SfBusyIndicator.XForms"  x:Class="GenericApp.Prism.Views.ProductsPage"  BackgroundColor="{StaticResource ColorBackground}"  Title="{Binding Title}">  <ContentPage.ToolbarItems>  <ToolbarItem Text="{Binding CartNumber}" Command="{Binding ShowCartCommand}"/>  </ContentPage.ToolbarItems>  <AbsoluteLayout>  <StackLayout AbsoluteLayout.LayoutBounds="0,0,1,1"  AbsoluteLayout.LayoutFlags="All"  Padding="5">  <SearchBar Placeholder="Buscar Producto..."  SearchCommand="{Binding SearchCommand}"  Text="{Binding Search}"/>  <CollectionView ItemsSource="{Binding Products}">  <CollectionView.ItemsLayout>  <GridItemsLayout Orientation="Vertical"/>  </CollectionView.ItemsLayout>  <CollectionView.ItemTemplate>  <DataTemplate>  <Grid>  <Grid.GestureRecognizers>  <TapGestureRecognizer Command="{Binding SelectProductCommand}"/>  </Grid.GestureRecognizers>  <Grid.ColumnDefinitions>  <ColumnDefinition Width="Auto" />  <ColumnDefinition Width="\*" />  <ColumnDefinition Width="Auto" />  </Grid.ColumnDefinitions>  <ffimageloading:CachedImage Grid.Column="0"  Aspect="AspectFill"  Source="{Binding ImageFullPath}"  CacheDuration= "50"  Margin="5"  RetryCount= "3"  RetryDelay= "600"  WidthRequest="100"/>  <StackLayout Grid.Column="1"  VerticalOptions="Center">  <Label Text="{Binding Name}"  FontAttributes="Bold"  FontSize="Medium"  LineBreakMode="TailTruncation" />  <Label Text="{Binding Price, StringFormat='{0:C2}'}"  LineBreakMode="TailTruncation"  FontAttributes="Italic"  VerticalOptions="End" />  </StackLayout>  <Image Grid.Column="2"  Source="ic\_more\_vert"/>  </Grid>  </DataTemplate>  </CollectionView.ItemTemplate>  </CollectionView>  </StackLayout>  <busyindicator:SfBusyIndicator AnimationType="Gear"  AbsoluteLayout.LayoutBounds=".5,.5,.5,.5"  AbsoluteLayout.LayoutFlags="All"  BackgroundColor="Transparent"  HorizontalOptions="Center"  TextColor="Blue"  IsBusy="{Binding IsRunning}"  Title="Cargando..."  VerticalOptions="Center"  ViewBoxWidth="80"  ViewBoxHeight="80" />  </AbsoluteLayout>  </ContentPage> |  |

## ProductsPageViewModel

Modificamos la **ProductsPageViewModel**

|  |  |
| --- | --- |
| **ProductsPageViewModel** | **Comentarios** |
| using GenericApp.Common.Responses;  using GenericApp.Common.Services;  using Prism.Commands;  using Prism.Navigation;  using System.Collections.Generic;  using System.Collections.ObjectModel;  using System.Linq;  using Xamarin.Essentials;  using GenericApp.Prism.ItemViewModels;  namespace GenericApp.Prism.ViewModels  {  public class ProductsPageViewModel : ViewModelBase  {  private readonly INavigationService \_navigationService;  private readonly IApiService \_apiService;  private bool \_isRunning;  private string \_search;  private List<ProductResponse> \_myProducts;  private DelegateCommand \_searchCommand;  private ObservableCollection<ProductItemViewModel> \_products;  private int \_cartNumber;  public int CartNumber  {  get => \_cartNumber;  set => SetProperty(ref \_cartNumber, value);  }  public ObservableCollection<ProductItemViewModel> Products  {  get => \_products;  set => SetProperty(ref \_products, value);  }  public DelegateCommand SearchCommand => \_searchCommand ?? (\_searchCommand = new DelegateCommand(ShowProducts));  public string Search  {  get => \_search;  set  {  SetProperty(ref \_search, value);  ShowProducts();  }  }  public ProductsPageViewModel(INavigationService navigationService, IApiService apiService) : base(navigationService)  {  \_navigationService = navigationService;  \_apiService = apiService;  Title = "Products";  LoadProductsAsync();  }  public bool IsRunning  {  get => \_isRunning;  set => SetProperty(ref \_isRunning, value);  }  private async void LoadProductsAsync()  {  if (Connectivity.NetworkAccess != NetworkAccess.Internet)  {  await App.Current.MainPage.DisplayAlert("Error", "Error de conexión.", "Aceptar");  return;  }  IsRunning = true;  string url = App.Current.Resources["UrlAPI"].ToString();  Response response = await \_apiService.GetListAsync<ProductResponse>(  url,  "api",  "/Products");  IsRunning = false;  if (!response.IsSuccess)  {  await App.Current.MainPage.DisplayAlert(  "Error",  response.Message,  "Aceptar");  return;  }  \_myProducts = (List<ProductResponse>)response.Result;  ShowProducts();  //List<Product> myProducts = (List<Product>)response.Result;  //Products = new ObservableCollection<Product>(myProducts);  }  private void ShowProducts()  {  if (string.IsNullOrEmpty(Search))  {  Products = new ObservableCollection<ProductItemViewModel>(\_myProducts.Select(p => new ProductItemViewModel(\_navigationService)  {  Category = p.Category,  Description = p.Description,  Id = p.Id,  IsActive = p.IsActive,  Name = p.Name,  Price = p.Price,  ProductImages = p.ProductImages,  })  .ToList());  }  else  {  Products = new ObservableCollection<ProductItemViewModel>(\_myProducts.Select(p => new ProductItemViewModel(\_navigationService)  {  Category = p.Category,  Description = p.Description,  Id = p.Id,  IsActive = p.IsActive,  Name = p.Name,  Price = p.Price,  ProductImages = p.ProductImages,  })  .Where(p => p.Name.ToLower().Contains(Search.ToLower()))  .ToList());  }  }  }  } |  |

# MasterDetailPage

## GenericAppMasterDetailPage

Dentro de la carpeta **GenericApp.Prism /Views** creamos la **GenericAppMasterDetailPage**

|  |  |
| --- | --- |
| **GenericAppMasterDetailPage** | **Comentarios** |
| <?xml version="1.0" encoding="utf-8" ?>  <MasterDetailPage xmlns="http://xamarin.com/schemas/2014/forms"  xmlns:x="http://schemas.microsoft.com/winfx/2009/xaml"  xmlns:prism="http://prismlibrary.com"  xmlns:ffimageloading="clr-namespace:FFImageLoading.Forms;assembly=FFImageLoading.Forms"  xmlns:fftransformations="clr-namespace:FFImageLoading.Transformations;assembly=FFImageLoading.Transformations"  prism:ViewModelLocator.AutowireViewModel="True"    x:Class="GenericApp.Prism.Views.GenericAppMasterDetailPage">  <MasterDetailPage.Master>  <ContentPage BackgroundColor="{StaticResource ColorSecondary}"  IconImageSource="ic\_action\_menu"  Title="Menu">  <ContentPage.Padding>  <OnPlatform x:TypeArguments="Thickness">  <On Platform="Android, UWP">0</On>  <On Platform="iOS">0,20,0,0</On>  </OnPlatform>  </ContentPage.Padding>  <StackLayout Padding="20">  <RelativeLayout>  <RelativeLayout.GestureRecognizers>  <TapGestureRecognizer Command="{Binding ModifyUserCommand}"/>  </RelativeLayout.GestureRecognizers>  <Image x:Name="Logo" HorizontalOptions="Center"  RelativeLayout.XConstraint="{ConstraintExpression Type=RelativeToParent,Property=X,Factor=1,Constant=60}"  HeightRequest="150"  Source="logo"/>  <ffimageloading:CachedImage x:Name="Picture"  RelativeLayout.YConstraint="{ConstraintExpression Type=RelativeToView, ElementName=Logo,Property=Y,Factor=1,Constant=140}"  Aspect="AspectFit"  Source="{Binding User.PictureFullPath}"  CacheDuration= "50"  HeightRequest="100"  Margin="5"  RetryCount= "3"  RetryDelay= "600">  <ffimageloading:CachedImage.Transformations>  <fftransformations:CircleTransformation />  </ffimageloading:CachedImage.Transformations>  </ffimageloading:CachedImage>  <ffimageloading:CachedImage x:Name="Team"  RelativeLayout.YConstraint="{ConstraintExpression Type=RelativeToView, ElementName=Picture,Property=Y,Factor=1,Constant=50}"  RelativeLayout.XConstraint="{ConstraintExpression Type=RelativeToView, ElementName=Picture,Property=X,Factor=1,Constant=60}"  Aspect="AspectFit"  Source="{Binding User.FavoriteTeam.LogoImageFullPath}"  CacheDuration= "50"  HeightRequest="50"  Margin="5"  RetryCount= "3"  RetryDelay= "600"/>  <Label RelativeLayout.YConstraint="{ConstraintExpression Type=RelativeToView, ElementName=Picture,Property=Y,Factor=1,Constant=118}"  FontAttributes="Bold"  FontSize="Medium"  Text="{Binding Player.FullName}"  TextColor="Black"/>  <Label RelativeLayout.YConstraint="{ConstraintExpression Type=RelativeToView, ElementName=Picture,Property=Y,Factor=1,Constant=100}"  FontAttributes="Bold"  FontSize="Small"  Text="{Binding Player.NickName}"  TextColor="Blue"/>  </RelativeLayout>  <Label FontAttributes="Bold"  FontSize="Large"  Text="{Binding User.FullName}"/>  <ListView BackgroundColor="Transparent"  ItemsSource="{Binding Menus}"  HasUnevenRows="True"  SeparatorVisibility="None">  <ListView.ItemTemplate>  <DataTemplate>  <ViewCell>  <Grid>  <Grid.GestureRecognizers>  <TapGestureRecognizer Command="{Binding SelectMenuCommand}"/>  </Grid.GestureRecognizers>  <Grid.ColumnDefinitions>  <ColumnDefinition Width="Auto"></ColumnDefinition>  <ColumnDefinition Width="\*"></ColumnDefinition>  </Grid.ColumnDefinitions>  <Image Grid.Column="0"  HeightRequest="32"  Margin="5"  Source="{Binding Icon}"  WidthRequest="32"/>  <Label Grid.Column="1"  FontAttributes="Bold"  VerticalOptions="Center"  Text="{Binding Title}"/>  </Grid>  </ViewCell>  </DataTemplate>  </ListView.ItemTemplate>  </ListView>  </StackLayout>  </ContentPage>  </MasterDetailPage.Master>  </MasterDetailPage> |  |

## GenericAppMasterDetailViewModel

Modificamos la **GenericAppMasterDetailPageViewModel**

|  |  |
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| **GenericAppMasterDetailPageViewModel** | **Comentarios** |
| using System.Collections.Generic;  using System.Collections.ObjectModel;  using System.Linq;  using Newtonsoft.Json;  using GenericApp.Common.Helpers;  using GenericApp.Common.Models;  using GenericApp.Common.Responses;  using GenericApp.Prism.ItemViewModels;  using GenericApp.Prism.Views;  using Prism.Navigation;  namespace GenericApp.Prism.ViewModels  {  public class GenericAppMasterDetailPageViewModel : ViewModelBase  {  private readonly INavigationService \_navigationService;  private static GenericAppMasterDetailPageViewModel \_instance;  public static GenericAppMasterDetailPageViewModel GetInstance()  {  return \_instance;  }  private UserResponse \_user;  public UserResponse User  {  get => \_user;  set => SetProperty(ref \_user, value);  }  public GenericAppMasterDetailPageViewModel(INavigationService navigationService) : base(navigationService)  {  \_instance = this;  \_navigationService = navigationService;  LoadMenus();  LoadUser();  }  public ObservableCollection<MenuItemViewModel> Menus { get; set; }  public void LoadUser()  {  if (Settings.IsLogin)  {  TokenResponse token = JsonConvert.DeserializeObject<TokenResponse>(Settings.Token);  User = token.User;  }  }  private void LoadMenus()  {  List<Menu> menus = new List<Menu>  {  new Menu  {  Icon = "ic\_card\_giftcard",  PageName = $"{nameof(ProductsPage)}",  Title = "Productos"  },    new Menu  {  Icon = "ic\_person",  PageName = $"{nameof(ModifyUserPage)}",  Title = "Modificar Usuario",  IsLoginRequired = true  },    new Menu  {  Icon = "ic\_exit\_to\_app",  PageName = $"{nameof(LoginPage)}",  Title = Settings.IsLogin ? "Cerrar Sesión" : "Login"  }  };  Menus = new ObservableCollection<MenuItemViewModel>(  menus.Select(m => new MenuItemViewModel(\_navigationService)  {  Icon = m.Icon,  PageName = m.PageName,  Title = m.Title,  IsLoginRequired = m.IsLoginRequired  }).ToList());  }  }  } |  |

# LoginPage

## LoginPage

Adicionamos la licencia de SyncFusion en **App.xaml.cs**:

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| **CountryEntity** | **Comentarios** |
| protected override async void OnInitialized()  {  Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("MTY2MzIyQDMxMzcyZTMzMmUzMFVnNW5KSnM2dTZmRDljWm1RYTduQXFwRmNKSzVPWk1lT1JGSFRySXZCUTA9");  InitializeComponent();  await NavigationService.NavigateAsync("NavigationPage/MainPage");  } |  |

Inicializamos en **MainActivity**:

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| **MainActivity** | **Comentarios** |
| global::Xamarin.Forms.Forms.Init(this, savedInstanceState);  new SfBusyIndicatorRenderer();  FFImageLoading.Forms.Platform.CachedImageRenderer.Init(true);  LoadApplication(new App(new AndroidInitializer())); |  |

Dentro de la carpeta **GenericApp.Prism /Views** creamos la **LoginPage**

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| **LoginPage** | **Comentarios** |
| <?xml version="1.0" encoding="utf-8" ?>  <ContentPage xmlns="http://xamarin.com/schemas/2014/forms"  xmlns:x="http://schemas.microsoft.com/winfx/2009/xaml"  xmlns:prism="http://prismlibrary.com"  prism:ViewModelLocator.AutowireViewModel="True"  xmlns:ios="clr-namespace:Xamarin.Forms.PlatformConfiguration.iOSSpecific;assembly=Xamarin.Forms.Core"  ios:Page.UseSafeArea="true"  xmlns:busyindicator="clr-namespace:Syncfusion.SfBusyIndicator.XForms;assembly=Syncfusion.SfBusyIndicator.XForms"  xmlns:inputLayout="clr-namespace:Syncfusion.XForms.TextInputLayout;assembly=Syncfusion.Core.XForms"  x:Class="GenericApp.Prism.Views.LoginPage"  BackgroundColor="{StaticResource ColorBackground}"  Title="{Binding Title}">  <AbsoluteLayout>  <StackLayout AbsoluteLayout.LayoutBounds="0,0,1,1"  AbsoluteLayout.LayoutFlags="All"  Padding="5">  <ScrollView>  <StackLayout>  <Image HeightRequest="150"  Margin="20"  Source="logo"/>  <StackLayout VerticalOptions="CenterAndExpand">  <inputLayout:SfTextInputLayout Hint="Email:"  ContainerType="Outlined">  <Entry Placeholder="Ingrese EMail..."  Keyboard="Email"  Text="{Binding Email}" />  </inputLayout:SfTextInputLayout>  <inputLayout:SfTextInputLayout Hint="Password:"  EnablePasswordVisibilityToggle="true"  ContainerType="Outlined">  <Entry Placeholder="Ingrese Password..."  IsPassword="True"  Text="{Binding Password}" />  </inputLayout:SfTextInputLayout>  </StackLayout>  <Label FontAttributes="Bold"  HorizontalOptions="Center"  Text="Olvidó su Password?"  TextColor="{StaticResource ColorAccent}"  VerticalOptions="CenterAndExpand">  <Label.GestureRecognizers>  <TapGestureRecognizer Command="{Binding ForgotPasswordCommand}"/>  </Label.GestureRecognizers>  </Label>  </StackLayout>  </ScrollView>  <StackLayout VerticalOptions="EndAndExpand">  <Button Command="{Binding LoginCommand}"  IsEnabled="{Binding IsEnabled}"  Text="Login"/>  <Button Command="{Binding RegisterCommand}"  IsEnabled="{Binding IsEnabled}"  Text="Registrarse"  Style="{StaticResource DangerButton}"/>  </StackLayout>  </StackLayout>  <busyindicator:SfBusyIndicator AnimationType="Gear"  AbsoluteLayout.LayoutBounds=".5,.5,.5,.5"  AbsoluteLayout.LayoutFlags="All"  BackgroundColor="Transparent"  HorizontalOptions="Center"  TextColor="Blue"  IsBusy="{Binding IsRunning}"  Title="Loading..."  VerticalOptions="Center"  ViewBoxWidth="80"  ViewBoxHeight="80" />  </AbsoluteLayout>  </ContentPage> |  |

Modificamos la **LoginPageViewModel**

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| **LoginPageViewModel** | **Comentarios** |
| using Newtonsoft.Json;  using GenericApp.Common.Requests;  using GenericApp.Common.Responses;  using GenericApp.Common.Services;  using GenericApp.Prism.Views;  using Prism.Commands;  using Prism.Navigation;  using Xamarin.Essentials;  using GenericApp.Common.Helpers;  namespace GenericApp.Prism.ViewModels  {  public class LoginPageViewModel : ViewModelBase  {  private bool \_isRunning;  private bool \_isEnabled;  private string \_password;  private DelegateCommand \_loginCommand;  private DelegateCommand \_registerCommand;  private DelegateCommand \_forgotPasswordCommand;  private readonly INavigationService \_navigationService;  private readonly IApiService \_apiService;  private string \_pageReturn;  public LoginPageViewModel(INavigationService navigationService, IApiService apiService) : base(navigationService)  {  \_navigationService = navigationService;  \_apiService = apiService;  Title = "Login";  IsEnabled = true;  }  public DelegateCommand LoginCommand => \_loginCommand ?? (\_loginCommand = new DelegateCommand(LoginAsync));  public DelegateCommand RegisterCommand => \_registerCommand ?? (\_registerCommand = new DelegateCommand(RegisterAsync));  public DelegateCommand ForgotPasswordCommand => \_forgotPasswordCommand ?? (\_forgotPasswordCommand = new DelegateCommand(ForgotPasswordAsync));  public bool IsRunning  {  get => \_isRunning;  set => SetProperty(ref \_isRunning, value);  }  public bool IsEnabled  {  get => \_isEnabled;  set => SetProperty(ref \_isEnabled, value);  }  public string Email { get; set; }  public string Password  {  get => \_password;  set => SetProperty(ref \_password, value);  }  public override void OnNavigatedTo(INavigationParameters parameters)  {  base.OnNavigatedTo(parameters);  if (parameters.ContainsKey("pageReturn"))  {  \_pageReturn = parameters.GetValue<string>("pageReturn");  }  }  private async void LoginAsync()  {  if (string.IsNullOrEmpty(Email))  {  await App.Current.MainPage.DisplayAlert(  "Error",  "You must enter an EMail",  "Accept");  return;  }  if (string.IsNullOrEmpty(Password))  {  await App.Current.MainPage.DisplayAlert(  "Error",  "You must enter an Password",  "Accept");  return;  }  IsRunning = true;  IsEnabled = false;  if (Connectivity.NetworkAccess != NetworkAccess.Internet)  {  IsRunning = false;  IsEnabled = true;  await App.Current.MainPage.DisplayAlert(  "Error",  "Connection Error",  "Accept");  return;  }  string url = App.Current.Resources["UrlAPI"].ToString();  TokenRequest request = new TokenRequest  {  Password = Password,  Username = Email  };  Response response = await \_apiService.GetTokenAsync(url, "api", "/Account/CreateToken", request);  IsRunning = false;  IsEnabled = true;  if (!response.IsSuccess)  {  await App.Current.MainPage.DisplayAlert(  "Error",  "Login Error",  "Accept");  Password = string.Empty;  return;  }  TokenResponse token = (TokenResponse)response.Result;  Settings.Token = JsonConvert.SerializeObject(token);  Settings.IsLogin = true;  IsRunning = false;  IsEnabled = true;  //await \_navigationService.NavigateAsync($"/{nameof(OnSaleMasterDetailPage)}/NavigationPage/{nameof(ProductsPage)}");  if (string.IsNullOrEmpty(\_pageReturn))  {  await \_navigationService.NavigateAsync($"/{nameof(GenericAppMasterDetailPage)}/NavigationPage/{nameof(ProductsPage)}");  }  else  {  await \_navigationService.NavigateAsync($"/{nameof(GenericAppMasterDetailPage)}/NavigationPage/{\_pageReturn}");  }  Password = string.Empty;  }  private async void ForgotPasswordAsync()  {  var parameters = new NavigationParameters();  parameters.Add("email", Email);  await \_navigationService.NavigateAsync(nameof(RecoverPasswordPage), parameters);  }  private async void RegisterAsync()  {  await \_navigationService.NavigateAsync(nameof(RegisterPage));  }  }  } |  |

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| **CountryEntity** | **Comentarios** |
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