MVC – JUAN CARLOS ZULUAGA

Contents

[CRUD 2](#_Toc459613797)

[MANUAL MIGRATION 5](#_Toc459613798)

[AUTOMATIC MIGRATIONS 5](#_Toc459613799)

[ONE TO MANY RELATIONSHIP 6](#_Toc459613800)

[DATA ANOTATIONS 6](#_Toc459613801)

[MANY TO MANY RELATIONSHIP 8](#_Toc459613802)

[DISABLE CASCADE DELETING RULE 9](#_Toc459613803)

[MENUS AND SUBMENUS 9](#_Toc459613804)

[AJAX CALLS 9](#_Toc459613805)

[WEB API & AJAX CALLS 11](#_Toc459613806)

[SECURITY 14](#_Toc459613807)

[LOGIN 14](#_Toc459613808)

[PERMISIONS 14](#_Toc459613809)

[CREATE ROLES AND SUPER USER 14](#_Toc459613810)

[MASTER DETAIL 16](#_Toc459613811)

[MODELS 16](#_Toc459613812)

[CONTROLLERS 18](#_Toc459613813)

[VIEWS 22](#_Toc459613814)

[PUBLISH THE APP 24](#_Toc459613815)

[UPLOAD AND SHOW IMAGES 24](#_Toc459613816)

[CREATE ROLE, USER AND ASSING ROLE TO USER 25](#_Toc459613817)

[MASTER DETAIL FORM 26](#_Toc459613818)

[ENABLE WEB TRACE 31](#_Toc459613819)

[CRYSTAL REPORTS IN APP PUBLISHED 31](#_Toc459613820)

[CASCADE DROPDOWNS 31](#_Toc459613821)

[RECOVER & EMAIL PASSWORD 33](#_Toc459613822)

[PAGING 34](#_Toc459613823)

[FILTERS IN VIEW 36](#_Toc459613824)

[MAIL HELPER 39](#_Toc459613825)

[USER HELPER 40](#_Toc459613826)

[USER MANAGEMENT 42](#_Toc459613827)

[TO IDENTIFICATE MODEL ERRORS 44](#_Toc459613828)

[IMPROVE FILE PICKER 44](#_Toc459613829)

# CRUD

1. Create the model:

public class Product

{

[Key]

public int ProductID { get; set; }

public string Description { get; set; }

public decimal Price { get; set; }

public DateTime LastBuy { get; set; }

public float Stock { get; set; }

}

1. Create folder Context and class Store Context:

public class StoreContext: DbContext

{

public DbSet<Product> Products { get; set; }

}

1. Rebuild the project
2. Change the connection string:

<add name="StoreContext"

connectionString="Data Source=.;Initial Catalog=Z-Market;Integrated Security=True"

providerName="System.Data.SqlClient" />

1. Add the Product Controller with read write actions
2. In the Index method:

private StoreContext db = new StoreContext();

// GET: Product

public ActionResult Index()

{

return View(db.Products.ToList());

}

1. In the Create method:

// GET: Product/Create

[HttpGet]

public ActionResult Create()

{

return View();

}

// POST: Product/Create

[HttpPost]

public ActionResult Create(Product product)

{

try

{

if (ModelState.IsValid)

{

db.Products.Add(product);

db.SaveChanges();

return RedirectToAction("Index");

}

return View(product);

}

catch

{

return View(product);

}

}

1. Change the route config:

routes.MapRoute(

name: "Default",

url: "{controller}/{action}/{id}",

defaults: new { controller = "Product", action = "Index", id = UrlParameter.Optional }

);

1. In the Details method:

// GET: Products/Details/5

public ActionResult Details(int? id)

{

if(id == null)

{

return new HttpStatusCodeResult(HttpStatusCode.BadRequest);

}

var product = db.Products.Find(id);

if(product == null)

{

return HttpNotFound();

}

return View(product);

}

1. In Edit method:

// GET: Products/Edit/5

public ActionResult Edit(int? id)

{

if (id == null)

{

return new HttpStatusCodeResult(HttpStatusCode.BadRequest);

}

var product = db.Products.Find(id);

if (product == null)

{

return HttpNotFound();

}

return View(product);

}

// POST: Products/Edit/5

[HttpPost]

public ActionResult Edit(Product product)

{

try

{

if (ModelState.IsValid)

{

db.Entry(product).State = EntityState.Modified;

db.SaveChanges();

return RedirectToAction("Index");

}

return View(product);

}

catch

{

return View(product);

}

}

1. In Delete method:

// GET: Products/Delete/5

public ActionResult Delete(int? id)

{

if (id == null)

{

return new HttpStatusCodeResult(HttpStatusCode.BadRequest);

}

var product = db.Products.Find(id);

if (product == null)

{

return HttpNotFound();

}

return View(product);

}

// POST: Products/Delete/5

[HttpPost]

public ActionResult Delete(int id, Product product)

{

try

{

if (ModelState.IsValid)

{

product = db.Products.Find(id);

if (product == null)

{

return HttpNotFound();

}

db.Products.Remove(product);

db.SaveChanges();

return RedirectToAction("Index");

}

return View(product);

}

catch

{

return View(product);

}

}

# MANUAL MIGRATION

1. Try to add a new field to model and run it the project:

public string Remarks { get; set; }

Do you get an error, right?

1. Reverse the change and enter the following command by Package Manager Console:

Enable-Migrations -ContextTypeName StoreContext

1. Make the model change again

public string Remarks { get; set; }

1. Run the command:

Add-Migration AddRemarks

1. Run the command:

Update-Database

1. Run the project!
2. Modify the controller and views to see the new field

# AUTOMATIC MIGRATIONS

1. Modify the model and try to access to the controller, a new error appears.
2. Run the following command:

Enable-Migrations -ContextTypeName StoreContext -EnableAutomaticMigrations –Force

1. Add the following line to the Configuration.cs in Migrations folder:

AutomaticMigrationDataLossAllowed = true;

1. In the Global.asax, add the following line:

Database.SetInitializer(new MigrateDatabaseToLatestVersion<Models.StoreContext, Migrations.Configuration>());

# ONE TO MANY RELATIONSHIP

1. Crete the new model Employee:

public class Employee

{

[Key]

public int EmployeeID { get; set; }

public string FirstName { get; set; }

public string LastName { get; set; }

public decimal Salary { get; set; }

public float BonusPercent { get; set; }

public DateTime DateOfBirth { get; set; }

public DateTime StartTime { get; set; }

public string EMail { get; set; }

public string URL { get; set; }

public int DocumentTypeID { get; set; }

public virtual DocumentType DocumentType { get; set; }

}

1. Create the new model Document Type:

public class DocumentType

{

[Key]

public int DocumentTypeID { get; set; }

public string Description { get; set; }

public virtual ICollection<Employee> Employees { get; set; }

}

1. Rebuild the application and create the controllers (MVC 5 Controller with views, using Entity Framework) for Document Type and Employee
2. Add those links to menu

<li>@Html.ActionLink("Products", "Index", "Products")</li>

<li>@Html.ActionLink("Document Types", "Index", "DocumentTypes")</li>

<li>@Html.ActionLink("Employees", "Index", "Employees")</li>

1. Run the project and add some records, then see the database

# DATA ANOTATIONS

1. Modify the Employee model by:

public class Employee

{

[Key]

public int EmployeeID { get; set; }

[Column("FirstName")]

[Required(ErrorMessage = "You must enter a {0}")]

[StringLength(30, ErrorMessage =

"The field {0} can contain maximun {1} and minimum {2} characters",

MinimumLength = 3)]

[Display(Name = "First Name")]

public string FirstName { get; set; }

[Required(ErrorMessage = "You must enter a {0}")]

[StringLength(30, ErrorMessage =

"The field {0} can contain maximun {1} and minimum {2} characters",

MinimumLength = 3)]

[Display(Name = "Last Name")]

public string LastName { get; set; }

[DisplayFormat(DataFormatString = "{0:C2}", ApplyFormatInEditMode = false)]

public decimal Salary { get; set; }

[Display(Name = "Bonus Percent")]

[DisplayFormat(DataFormatString = "{0:P2}", ApplyFormatInEditMode = false)]

[Range(0, 20, ErrorMessage = "The field {0} can take values between {1} and {2}")]

public float BonusPercent { get; set; }

[Display(Name = "Date Of Birth")]

[DataType(DataType.Date)]

[DisplayFormat(DataFormatString = "{0:yyyy-MM-dd}", ApplyFormatInEditMode = true)]

public DateTime DateOfBirth { get; set; }

[Display(Name = "Start Time")]

[DataType(DataType.Time)]

[DisplayFormat(DataFormatString = "{0:hh:mm}", ApplyFormatInEditMode = true)]

public DateTime StartTime { get; set; }

[DataType(DataType.EmailAddress)]

[Index("EMailIndex", IsUnique = true)]

public string EMail { get; set; }

[DataType(DataType.Url)]

public string URL { get; set; }

public int DocumentTypeID { get; set; }

public virtual DocumentType DocumentType { get; set; }

}

Sample to create a composite index:

[Index("CategoryDescriptionCompanyIdIndex", 1, IsUnique = true)]

public string Description { get; set; }

[Index("CategoryDescriptionCompanyIdIndex", 2, IsUnique = true)]

public int CompanyId { get; set; }

1. Modify the Document Type model by:

[Table("DocumentType")]

public class DocumentType

{

[Key]

public int DocumentTypeID { get; set; }

[Required(ErrorMessage = "You must enter a {0}")]

[Display(Name = "Document description")]

public string Description { get; set; }

public virtual ICollection<Employee> Employees { get; set; }

}

# MANY TO MANY RELATIONSHIP

1. Crete the new model Supplier:

public class Supplier

{

[Key]

public int SupplierID { get; set; }

public string Name { get; set; }

public string ContactFirstName { get; set; }

public string ContactLasttName { get; set; }

public string Phone { get; set; }

public string Address { get; set; }

public string EMail { get; set; }

public virtual ICollection<SupplierProduct> SuppliersProducts { get; set; }

}

1. Modify the Product model:

public class Product

{

[Key]

public int ProductID { get; set; }

public string Description { get; set; }

public decimal Price { get; set; }

public DateTime LastBuy { get; set; }

public float Stock { get; set; }

public string Remarks { get; set; }

public virtual ICollection<SupplierProduct> SuppliersProducts { get; set; }

}

1. Add the new model, Supplier Product:

public class SupplierProduct

{

[Key]

public int SupplierProductID { get; set; }

public int SupplierID { get; set; }

public int ProductID { get; set; }

public virtual Supplier Supplier { get; set; }

public virtual Product Product { get; set; }

}

1. Create the new controller for Suppliers, add some records and see the database.

# DISABLE CASCADE DELETING RULE

1. Add this method in the context database class:

protected override void OnModelCreating(DbModelBuilder modelBuilder)

{

modelBuilder.Conventions.Remove<OneToManyCascadeDeleteConvention>();

}

1. And modify the Delete method in the controller

public ActionResult DeleteConfirmed(int id)

{

DocumentType documentType = db.DocumentTypes.Find(id);

db.DocumentTypes.Remove(documentType);

try

{

db.SaveChanges();

}

catch { }

return RedirectToAction("Index");

}

**PENDING TO DOCUMENT THE ERROR MESSAGE**

# MENUS AND SUBMENUS

<div class="navbar-collapse collapse">

<ul class="nav navbar-nav" style="font-weight:bold;">

<li>@Html.ActionLink("Home", "Index", "Home")</li>

<li>@Html.ActionLink("About", "About", "Home")</li>

<li>@Html.ActionLink("Contact", "Contact", "Home")</li>

<li class="dropdown">

<a href="#" class="dropdown-toggle" data-toggle="dropdown">File<b class="caret"></b></a>

<ul class="dropdown-menu">

<li>@Html.ActionLink("Products", "Index", "Products")</li>

<li>@Html.ActionLink("Document Types", "Index", "DocumentTypes")</li>

<li>@Html.ActionLink("Employees", "Index", "Employees")</li>

</ul>

</li>

</ul>

@Html.Partial("\_LoginPartial")

</div>

# AJAX CALLS

1. Crete the new empty controller AJAX Concept:

public ActionResult Index()

{

return View();

}

public JsonResult JsonFactorial(int n)

{

if (!Request.IsAjaxRequest())

{

return null;

}

return new JsonResult

{

Data = new

{

Factorial = Factorial(n)

}

};

}

private double Factorial(int n)

{

double fac = 1;

for (int i = 2; i <= n; i++)

{

fac \*= i;

}

return fac;

}

1. Add the index view with the following lines:

@{

ViewBag.Title = "Home Page";

}

<h1>AJAX</h1>

@using (Html.BeginForm())

{

@Html.TextBox("txtN", 0)

<button id="btnCalculaFactorial">Calcular Factorial</button>

<div id="lblMessage"></div>

}

@section Scripts {

<script type="text/javascript">

$(function () {

$('#btnCalculaFactorial').on("click", function () {

$.ajax({

type: "POST",

url: '@Url.Action("JsonFactorial")',

data: { 'n': $('#txtN').val() },

datatype: 'json',

cache: false

( })

.success(function (data) {

$('#lblMessage').html(data.Factorial);

})

.error(function (xhr, ajaxOptions, thrownError) {

$('#lblMessage').html("There was an error");

});

return false;

});

});

</script>

}

1. Test it!

# WEB API & AJAX CALLS

1. Create the API controller to the required model.
2. Create the new action in any controller, with the following lines:

public ActionResult Students()

{

return View();

}

1. Add to the project a file like “loader.gif”
2. Add the view with the following lines:

@{

ViewBag.Title = "Students";

}

<h2>Students</h2>

@using (Html.BeginForm())

{

<button id="btnGetStudents">Get Students</button><br />

<button id="btnGetStudent">Get Student</button>

<input id="txtStudentID" type="text" value="1"/><br />

<button id="btnAddStudent">Add Student</button><br />

<button id="btnUpdateStudent">Update Student</button><br />

<button id="btnDeleteStudent">Delete Student</button>

<input id="txtStudentIDToDelete" type="text" value="1" /><br />

<div id="lblMensaje"></div>

}

@section Scripts

{

<script type="text/javascript">

$(function () {

$("#btnGetStudents").on("click", function () {

$.ajax({

type: "GET",

url: "/api/StudentsAPI",

datatype: "json",

cache: false,

})

.success(function (data) {

var outPut = "";

for (var i = 0; i < data.length; i++) {

outPut += "<hr/>";

outPut += "<b>Student ID : </b>" + data[i].StudentID + "<br/>";

outPut += "<b>Name : </b>" + data[i].Name + "<br/>";

outPut += "<b>Sure name : </b>" + data[i].SureName + "<br/>";

}

$("#lblMensaje").html(outPut);

})

.error(function (xhr, ajaxOptions, thrownError) {

$("#lblMensaje").html("Error: an error occured");

});

return false;

});

$("#btnGetStudent").on("click", function () {

var studentID = $("#txtStudentID").val();

$.ajax({

type: "GET",

url: "/api/StudentsAPI/" + studentID,

datatype: "json",

cache: false,

})

.success(function (data) {

if (data != null) {

var outPut = "";

outPut += "<hr/>";

outPut += "<b>Student ID : </b>" + data.StudentID + "<br/>";

outPut += "<b>Name : </b>" + data.Name + "<br/>";

outPut += "<b>Sure name : </b>" + data.SureName + "<br/>";

$("#lblMensaje").html(outPut);

} else {

$("#lblMensaje").html("No records found");

}

})

.error(function (xhr, ajaxOptions, thrownError) {

$("#lblMensaje").html("Error: an error occured");

});

return false;

});

$("#btnAddStudent").on("click", function () {

var student = { Name: "Valery", SureName: "Zuluaga" };

$.ajax({

type: "POST",

url: "/api/StudentsAPI/",

data: student,

datatype: "json",

cache: false,

})

.success(function (data) {

var outPut = "";

outPut += "<hr/><b>The new student is the following</b>";

outPut += "<b>Student ID : </b>" + data.StudentID + "<br/>";

outPut += "<b>Name : </b>" + data.Name + "<br/>";

outPut += "<b>Sure name : </b>" + data.SureName + "<br/>";

$("#lblMensaje").html(outPut);

})

.error(function (xhr, ajaxOptions, thrownError) {

$("#lblMensaje").html("Error: an error occured");

});

return false;

});

$("#btnUpdateStudent").on("click", function () {

var student = { StudentID: 1, Name: "Hector", SureName: "Lavoe" };

$.ajax({

type: "PUT",

url: "/api/StudentsAPI/1",

data: student,

datatype: "json",

cache: false,

})

.success(function (data) {

var outPut = "";

outPut += "<hr/><b>The update was complete</b>";

$("#lblMensaje").html(outPut);

})

.error(function (xhr, ajaxOptions, thrownError) {

$("#lblMensaje").html("Error: an error occured");

});

return false;

});

$("#btnDeleteStudent").on("click", function () {

var studentID = $("#txtStudentIDToDelete").val();

$.ajax({

type: "DELETE",

url: "/api/StudentsAPI/" + studentID,

datatype: "json",

cache: false,

})

.success(function (data) {

if (data != null) {

var outPut = "";

outPut += "<hr/><b>The student delete was</b>";

outPut += "<b>Student ID : </b>" + data.StudentID + "<br/>";

outPut += "<b>Name : </b>" + data.Name + "<br/>";

outPut += "<b>Sure name : </b>" + data.SureName + "<br/>";

$("#lblMensaje").html(outPut);

} else {

$("#lblMensaje").html("No records found");

}

})

.error(function (xhr, ajaxOptions, thrownError) {

$("#lblMensaje").html("Error: an error occured");

});

return false;

});

$(document).ajaxStart(function () {

$("#loading").show();

});

$(document).ajaxStop(function () {

$("#loading").hide();

});

});

</script>

}

<style type="text/css">

#loading {

display: none;

background-color: gray;

z-index: 999999;

position: absolute;

left: 0;

top: 0;

width: 100%;

height: 100%;

text-align:center;

padding-top: 300px;

filter: alpha(opacity=75);

-khtml-opacity: 0.75;

-moz-opacity: 0.75;

opacity: 0.75;

}

</style>

<div id="loading"><img src="~/images/loader.gif"/></div>

# SECURITY

## LOGIN

1. Create new user
2. Create the new application in Facebook developer
3. Edit the file Startup.Auth.cs in App\_Start folder, and put the application ID and application secret
4. Run the application and test it!!!

**Note**: for google see: <http://www.oauthforaspnet.com/providers/google/guides/aspnet-mvc5/>

## PERMISIONS

1. To demand access to the specific action, use [Authorize] in the action
2. To demand access to the whole controller, use [Authorize] in the controller
3. To allows anonymous in the specific action for a Authorize controller, uses: [AllowAnonymous]
4. To demand access to a specific user list, uses: [Authorize(Users = "jzuluaga55@gmail.com, jzuluaga55@hotmail.com")]
5. To demand access to a specific roll list, uses: [Authorize(Roles = "Admin")]

## CREATE ROLES AND SUPER USER

1. Add this line in the Global.asax:

CreateRolesAndSuperuser();

1. Implement the method:

private void CreateRolesAndSuperuser()

{

ApplicationDbContext db = new ApplicationDbContext();

CreateRoles(db);

CreateSuperuser(db);

AddPermisionsToSuperuser(db);

db.Dispose();

}

private void CreateRoles(ApplicationDbContext db)

{

var roleManager = new RoleManager<IdentityRole>(new RoleStore<IdentityRole>(db));

if (!roleManager.RoleExists("View"))

{

var result = roleManager.Create(new IdentityRole("View"));

}

if (!roleManager.RoleExists("Edit"))

{

var result = roleManager.Create(new IdentityRole("Edit"));

}

if (!roleManager.RoleExists("Create"))

{

var result = roleManager.Create(new IdentityRole("Create"));

}

if (!roleManager.RoleExists("Delete"))

{

var result = roleManager.Create(new IdentityRole("Delete"));

}

}

private void CreateSuperuser(ApplicationDbContext db)

{

var userManager = new UserManager<ApplicationUser>(new UserStore<ApplicationUser>(db));

var user = userManager.FindByName("jzuluaga55@hotmail.com");

if (user == null)

{

user = new ApplicationUser();

user.UserName = "jzuluaga55@hotmail.com";

user.Email = "jzuluaga55@hotmail.com";

var result = userManager.Create(user, "Zulu123.");

}

}

private void AddPermisionsToSuperuser(ApplicationDbContext db)

{

var userManager = new UserManager<ApplicationUser>(new UserStore<ApplicationUser>(db));

var roleManager = new RoleManager<IdentityRole>(new RoleStore<IdentityRole>(db));

var user = userManager.FindByName("jzuluaga55@hotmail.com");

if (!userManager.IsInRole(user.Id, "View"))

{

userManager.AddToRole(user.Id, "View");

}

if (!userManager.IsInRole(user.Id, "Edit"))

{

userManager.AddToRole(user.Id, "Edit");

}

if (!userManager.IsInRole(user.Id, "Create"))

{

userManager.AddToRole(user.Id, "Create");

}

if (!userManager.IsInRole(user.Id, "Delete"))

{

userManager.AddToRole(user.Id, "Delete");

}

}

# MASTER DETAIL

## MODELS

namespace Z\_Market.Models

{

public class Order

{

[Key]

public int OrderID { get; set; }

[Required]

public int CustomerID { get; set; }

[Required]

[DataType(DataType.DateTime)]

public DateTime DateOrder { get; set; }

[Required]

public OrderStatus OrderStatus { get; set; }

public virtual Customer Customer { get; set; }

public virtual ICollection<OrderDetails> Details { get; set; }

}

}

namespace Z\_Market.Models

{

public class OrderDetails

{

[Key]

public int OrderDetailsID { get; set; }

public int OrderID { get; set; }

public int ProductID { get; set; }

[Display(Name = "Product Description")]

public string Description { get; set; }

[DataType(DataType.Currency)]

[DisplayFormat(DataFormatString = "{0:C2}", ApplyFormatInEditMode = false)]

public decimal Price { get; set; }

[DataType(DataType.Currency)]

[DisplayFormat(DataFormatString = "{0:N2}", ApplyFormatInEditMode = false)]

public float Quantity { get; set; }

public virtual Order Order { get; set; }

public virtual Product Product { get; set; }

}

}

In the context:

public System.Data.Entity.DbSet<Z\_Market.Models.Order> Orders { get; set; }

public System.Data.Entity.DbSet<Z\_Market.Models.OrderDetails> OrdersDetails { get; set; }

In the Model Views:

namespace Z\_Market.ModelViews

{

public class OrderView

{

public Customer Customer { get; set; }

public ProductOrder Product { get; set; }

public List<ProductOrder> Products { get; set; }

}

}

namespace Z\_Market.Models

{

public class Customer

{

[Key]

[Required(ErrorMessage = "You must enter the field {0}")]

[Range(1, 999999, ErrorMessage = "You must enter a valid value in the field {0}")]

public int CustomerID { get; set; }

[StringLength(30, ErrorMessage = "The field {0} must contain between {2} and {1} characters", MinimumLength = 3)]

[Required(ErrorMessage = "You must enter the field {0}")]

[Display(Name = "First Name")]

public string FirstName { get; set; }

[StringLength(30, ErrorMessage = "The field {0} must contain between {2} and {1} characters", MinimumLength = 3)]

[Required(ErrorMessage = "You must enter the field {0}")]

[Display(Name = "Last Name")]

public string LastName { get; set; }

[StringLength(20, ErrorMessage = "The field {0} must contain between {2} and {1} characters", MinimumLength = 5)]

[Required(ErrorMessage = "You must enter the field {0}")]

public string Document { get; set; }

[Display(Name = "Document Type")]

public int DocumentTypeID { get; set; }

[DataType(DataType.PhoneNumber)]

[StringLength(30, ErrorMessage = "The field {0} must contain between {2} and {1} characters", MinimumLength = 3)]

[Required(ErrorMessage = "You must enter the field {0}")]

public string Phone { get; set; }

[StringLength(30, ErrorMessage = "The field {0} must contain between {2} and {1} characters", MinimumLength = 3)]

[Required(ErrorMessage = "You must enter the field {0}")]

public string Address { get; set; }

[DataType(DataType.EmailAddress)]

public string EMail { get; set; }

[NotMapped]

public string FullName { get { return string.Format("{0} {1}", FirstName, LastName) ;} }

public virtual DocumentType DocumentType { get; set; }

public virtual ICollection<Order> Orders { get; set; }

}

}

namespace Z\_Market.Models

{

public class ProductOrder: Product

{

[DataType(DataType.Currency)]

[Required(ErrorMessage = "You must enter the field {0}")]

[DisplayFormat(DataFormatString = "{0:N2}", ApplyFormatInEditMode = false)]

public float Quantity { get; set; }

[DataType(DataType.Currency)]

[DisplayFormat(DataFormatString = "{0:C2}", ApplyFormatInEditMode = false)]

public decimal Value { get { return Price \* (decimal)Quantity; } }

}

}

namespace Z\_Market.Models

{

public class Product

{

[Key]

[Required(ErrorMessage = "You must enter the field {0}")]

[Range(1, 999999, ErrorMessage = "You must enter a valid value in the field {0}")]

public int ProductID { get; set; }

[StringLength(30, ErrorMessage = "The field {0} must contain between {2} and {1} characters", MinimumLength = 3)]

[Required(ErrorMessage = "You must enter the field {0}")]

[Display(Name = "Product Description")]

public string Description { get; set; }

[DataType(DataType.Currency)]

[DisplayFormat(DataFormatString = "{0:C2}", ApplyFormatInEditMode = false)]

[Required(ErrorMessage = "You must enter the field {0}")]

public decimal Price { get; set; }

[DataType(DataType.Date)]

[DisplayFormat(DataFormatString = "{0:dd/MM/yyyy}", ApplyFormatInEditMode = true)]

[Display(Name = "Last Buy")]

public DateTime LastBuy { get; set; }

[DataType(DataType.Currency)]

[DisplayFormat(DataFormatString = "{0:N2}", ApplyFormatInEditMode = false)]

public float Stock { get; set; }

[DataType(DataType.MultilineText)]

public string Remarks { get; set; }

public virtual ICollection<SupplierProduct> SupplierProducts { get; set; }

}

}

## CONTROLLERS

namespace Z\_Market.Controllers

{

public class OrdersController : Controller

{

Z\_MarketContext db = new Z\_MarketContext();

public ActionResult NewOrder()

{

var orderView = new OrderView();

orderView.Customer = new Customer();

orderView.Products = new List<ProductOrder>();

Session["orderView"] = orderView;

var customers = db.Customers.ToList();

customers.Add(new Customer { CustomerID = 0, FirstName = "[Select a customer...]" });

ViewBag.CustomerID = new SelectList(

customers.OrderBy(c => c.FullName),

"CustomerID", "FullName", orderView.Customer.CustomerID);

return View(orderView);

}

[HttpPost]

public ActionResult NewOrder(OrderView orderView)

{

orderView = Session["orderView"] as OrderView;

int customerID = int.Parse(Request["CustomerID"]);

if(customerID == 0)

{

ViewBag.Error = "You must select a customer";

var customers = db.Customers.ToList();

customers.Add(new Customer { CustomerID = 0, FirstName = "[Select a customer...]" });

ViewBag.CustomerID = new SelectList(

customers.OrderBy(c => c.FullName),

"CustomerID", "FullName", orderView.Customer.CustomerID);

return View(orderView);

}

var customer = db.Customers.Find(customerID);

if (customer == null)

{

ViewBag.Error = "The customer does not exit";

var customers = db.Customers.ToList();

customers.Add(new Customer { CustomerID = 0, FirstName = "[Select a customer...]" });

ViewBag.CustomerID = new SelectList(

customers.OrderBy(c => c.FullName),

"CustomerID", "FullName", orderView.Customer.CustomerID);

return View(orderView);

}

orderView.Customer.CustomerID = customerID;

if (orderView.Products.Count == 0)

{

ViewBag.Error = "You must enter details";

var customers = db.Customers.ToList();

customers.Add(new Customer { CustomerID = 0, FirstName = "[Select a customer...]" });

ViewBag.CustomerID = new SelectList(

customers.OrderBy(c => c.FullName),

"CustomerID", "FullName", orderView.Customer.CustomerID);

return View(orderView);

}

var order = new Order

{

CustomerID = customerID,

DateOrder = DateTime.Now,

OrderStatus = OrderStatus.Created

};

int orderID = 0;

using (var transaction = db.Database.BeginTransaction())

{

try

{

db.Orders.Add(order);

db.SaveChanges();

orderID = db.Orders.Select(o => o.OrderID).Max();

foreach (var item in orderView.Products)

{

var orderDetail = new OrderDetails

{

Description = item.Description,

OrderID = orderID,

Price = item.Price,

ProductID = item.ProductID,

Quantity = item.Quantity

};

db.OrdersDetails.Add(orderDetail);

}

db.SaveChanges();

transaction.Commit();

}

catch (Exception ex)

{

transaction.Rollback();

ViewBag.Error = "Error:" + ex.Message;

var cstomers = db.Customers.ToList();

cstomers.Add(new Customer { CustomerID = 0, FirstName = "[Select a customer...]" });

ViewBag.CustomerID = new SelectList(

cstomers.OrderBy(c => c.FullName),

"CustomerID", "FullName", orderView.Customer.CustomerID);

return View(orderView);

}

}

ViewBag.Message = string.Format("Order: {0} saved sucessfully", orderID);

orderView.Customer = new Customer();

orderView.Products = new List<ProductOrder>();

var cstomrs = db.Customers.ToList();

cstomrs.Add(new Customer { CustomerID = 0, FirstName = "[Select a customer...]" });

ViewBag.CustomerID = new SelectList(

cstomrs.OrderBy(c => c.FullName),

"CustomerID", "FullName", orderView.Customer.CustomerID);

return View(orderView);

}

public ActionResult AddProduct()

{

var productOrder = new ProductOrder();

var products = db.Products.ToList();

products.Add(new Product { ProductID = 0, Description = "[Select a product...]" });

ViewBag.ProductID = new SelectList(

products.OrderBy(p => p.Description),

"ProductID", "Description", productOrder.ProductID);

return View();

}

[HttpPost]

public ActionResult AddProduct(ProductOrder productOrder)

{

var orderView = Session["orderView"] as OrderView;

var productID = int.Parse(Request["ProductID"]);

if(productID == 0)

{

var products = db.Products.ToList();

products.Add(new Product { ProductID = 0, Description = "[Select a product...]" });

ViewBag.ProductID = new SelectList(

products.OrderBy(p => p.Description),

"ProductID", "Description", productOrder.ProductID);

return View(productOrder);

}

var product = db.Products.Find(productID);

if (product == null)

{

var products = db.Products.ToList();

products.Add(new Product { ProductID = 0, Description = "[Select a product...]" });

ViewBag.ProductID = new SelectList(

products.OrderBy(p => p.Description),

"ProductID", "Description", productOrder.ProductID);

return View(productOrder);

}

float quantity = 0;

if (!float.TryParse(Request["Quantity"], out quantity) || quantity <= 0)

{

var products = db.Products.ToList();

products.Add(new Product { ProductID = 0, Description = "[Select a product...]" });

ViewBag.ProductID = new SelectList(

products.OrderBy(p => p.Description),

"ProductID", "Description", productOrder.ProductID);

return View(productOrder);

}

productOrder = orderView.Products.Find(p => p.ProductID == productID);

if (productOrder == null)

{

productOrder = new ProductOrder

{

Description = product.Description,

LastBuy = product.LastBuy,

Price = product.Price,

ProductID = product.ProductID,

Quantity = float.Parse(Request["Quantity"]),

Remarks = product.Remarks,

Stock = product.Stock

};

orderView.Products.Add(productOrder);

}

else

{

productOrder.Quantity += quantity;

}

var customers = db.Customers.ToList();

customers.Add(new Customer { CustomerID = 0, FirstName = "[Select a customer...]" });

ViewBag.CustomerID = new SelectList(

customers.OrderBy(c => c.FullName),

"CustomerID", "FullName", orderView.Customer.CustomerID);

return View("NewOrder", orderView);

}

}

}

## VIEWS

@model Z\_Market.ModelViews.OrderView

@{

ViewBag.Title = "NewOrder";

}

<h2>New Order</h2>

<h3>@ViewBag.Error</h3>

<h3>@ViewBag.Message</h3>

@using (Html.BeginForm("NewOrder", "Orders", FormMethod.Post))

{

@Html.AntiForgeryToken()

<div class="form-horizontal">

@Html.ValidationSummary(true, "", new { @class = "text-danger" })

<div class="form-group">

@Html.LabelFor(model => model.Customer.CustomerID, "CustomerID", htmlAttributes: new { @class = "control-label col-md-2" })

<div class="col-md-10">

@Html.DropDownList("CustomerID", null, htmlAttributes: new { @class = "form-control" })

@Html.ValidationMessageFor(model => model.Customer.CustomerID, "", new { @class = "text-danger" })

</div>

</div>

@Html.ActionLink("Add Product", "AddProduct", new { }, new { @class = "btn btn-default" })

<input type="submit" value="Save Order" class="btn btn-default" />

</div>

}

<h3>Details</h3>

<table class="table">

<tr>

<th>

@Html.DisplayNameFor(model => model.Product.Description)

</th>

<th>

@Html.DisplayNameFor(model => model.Product.Price)

</th>

<th>

@Html.DisplayNameFor(model => model.Product.Quantity)

</th>

<th>

@Html.DisplayNameFor(model => model.Product.Value)

</th>

<th></th>

</tr>

@for (int i = 0; i < Model.Products.Count; i++)

{

<tr>

<td>

@Html.DisplayFor(modelItem => Model.Products[i].Description)

</td>

<td>

@Html.DisplayFor(modelItem => Model.Products[i].Price)

</td>

<td>

@Html.DisplayFor(modelItem => Model.Products[i].Quantity)

</td>

<td>

@Html.DisplayFor(modelItem => Model.Products[i].Value)

</td>

<td>

@Html.ActionLink("Edit", "Edit", new { id = Model.Products[i].ProductID }) |

@Html.ActionLink("Delete", "Delete", new { id = Model.Products[i].ProductID })

</td>

</tr>

}

</table>

@model Z\_Market.Models.ProductOrder

@{

ViewBag.Title = "AddProduct";

}

<h2>Add Product</h2>

<h3>@ViewBag.Error</h3>

@using (Html.BeginForm())

{

@Html.AntiForgeryToken()

<div class="form-horizontal">

@Html.ValidationSummary(true, "", new { @class = "text-danger" })

<div class="form-group">

@Html.LabelFor(model => model.ProductID, "ProductID", htmlAttributes: new { @class = "control-label col-md-2" })

<div class="col-md-10">

@Html.DropDownList("ProductID", null, htmlAttributes: new { @class = "form-control" })

@Html.ValidationMessageFor(model => model.ProductID, "", new { @class = "text-danger" })

</div>

</div>

<div class="form-group">

@Html.LabelFor(model => model.Quantity, htmlAttributes: new { @class = "control-label col-md-2" })

<div class="col-md-10">

@Html.EditorFor(model => model.Quantity, new { htmlAttributes = new { @class = "form-control" } })

@Html.ValidationMessageFor(model => model.Quantity, "", new { @class = "text-danger" })

</div>

</div>

<div class="form-group">

<div class="col-md-offset-2 col-md-10">

<input type="submit" value="Add Product" class="btn btn-default" />

</div>

</div>

</div>

}

# PUBLISH THE APP

1. Backup and compress Data Base.
2. Make this changes in the Web Config
   1. The connection strings:

<remove name="DefaultConnection"/>

<add name="DefaultConnection"

connectionString="Data Source=10.61.44.196;Initial Catalog=Z-Market2;Persist Security Info=True;User ID=zuluadmin;Password=zuluadmin2015"

providerName="System.Data.SqlClient" />

<remove name="Z\_MarketContext"/>

<add name="Z\_MarketContext"

connectionString="Data Source=10.61.44.196;Initial Catalog=Z-Market2;Persist Security Info=True;User ID=zuluadmin;Password=zuluadmin2015"

providerName="System.Data.SqlClient" />

* 1. In the run time:

<dependentAssembly>

<assemblyIdentity name="EntityFramework" publicKeyToken="b77a5c561934e089" culture="neutral" />

<bindingRedirect oldVersion="0.0.0.0-5.0.0.0" newVersion="6.0.0.0" />

</dependentAssembly>

* 1. Comment the entity framework in configSections:

<configSections>

<!--<section name="entityFramework" type="System.Data.Entity.Internal.ConfigFile.EntityFrameworkSection, EntityFramework, Version=6.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089" requirePermission="false" />-->

<!-- For more information on Entity Framework configuration, visit http://go.microsoft.com/fwlink/?LinkID=237468 -->

</configSections>

# UPLOAD AND SHOW IMAGES

1. Create a new model called UserView, with all the attributes and change the attribute string photo by:

public HttpPostedFileBase Photo { get; set; }

1. Create the folder Photos into Content folder
2. Change the view and replace the photo section by:

<div class="form-group">

@Html.LabelFor(model => model.LogoFile, htmlAttributes: new { @class = "control-label col-md-2" })

<div class="col-md-10">

<span class="btn btn-default btn-file">

@Html.TextBoxFor(modelo => modelo.LogoFile, new { type = "file" })

</span>

</div>

</div>

1. Don’t forget change this line in the view by:

@using (Html.BeginForm("Create", "Users", FormMethod.Post, new { enctype = "multipart/form-data" }))

1. Create the helper class with the method to upload files:

public static string UploadPhoto(HttpPostedFileBase file, string folder)

{

string path = string.Empty;

string pic = string.Empty;

if (file != null)

{

pic = Path.GetFileName(file.FileName);

path = Path.Combine(HttpContext.Current.Server.MapPath(folder), pic);

file.SaveAs(path);

using (MemoryStream ms = new MemoryStream())

{

file.InputStream.CopyTo(ms);

byte[] array = ms.GetBuffer();

}

}

return pic;

}

1. Change the create and edit method to call the upload photo:

var pic = string.Empty;

var folder = "~/Content/Logos";

if (view.LogoFile != null)

{

pic = FilesHelper.UploadPhoto(view.LogoFile, folder);

pic = string.Format("{0}/{1}", folder, pic);

}

1. Change the index view for show the image:

@if (!string.IsNullOrEmpty(item.Logo))

{

<img src="@Url.Content(item.Logo)" alt="Image" style="width:100px;height:150px;max-width: 100%; height: auto;" />

}

# CREATE ROLE, USER AND ASSING ROLE TO USER

1. After save changes in create user, add the line:

this.CreateASPUser(userView);

1. Add this method:

private void CreateASPUser(UserView userView)

{

// User management

var userContext = new ApplicationDbContext();

var userManager = new UserManager<ApplicationUser>(new UserStore<ApplicationUser>(userContext));

var roleManager = new RoleManager<IdentityRole>(new RoleStore<IdentityRole>(userContext));

// Create User role

string roleName = "User";

// Check to see if Role Exists, if not create it

if (!roleManager.RoleExists(roleName))

{

roleManager.Create(new IdentityRole(roleName));

}

// Create the ASP NET User

var userASP = new ApplicationUser

{

UserName = userView.UserName,

Email = userView.UserName,

PhoneNumber = userView.Phone,

};

userManager.Create(userASP, userASP.UserName);

// Add user to role

userASP = userManager.FindByName(userView.UserName);

userManager.AddToRole(userASP.Id, "User");

}

# MASTER DETAIL FORM

1. Creates the Group Member model, with their relations:

public class GroupMember

{

[Key]

public int GroupMemberId { get; set; }

public int GroupId { get; set; }

public int UserId { get; set; }

public virtual Group Group { get; set; }

public virtual User User { get; set; }

}

1. Add the relation in group model:

public virtual ICollection<GroupMember> GroupMembers { get; set; }

1. Add the relation in user model:

public virtual ICollection<GroupMember> GroupMembers { get; set; }

1. In the context add the respective DB Set to the group member model:

public DbSet<GroupMember> GroupMembers { get; set; }

1. Create the Group View class, this class will be the main class to build the master detail form:

public class GroupView

{

/// <summary>

/// Gets or sets the group id

/// </summary>

public int GroupId { get; set; }

/// <summary>

/// Gets or sets the group description

/// </summary>

[Required(ErrorMessage = "The field {0} is required")]

[Display(Name = "Group description")]

public string Description { get; set; }

/// <summary>

/// Gets or sets the group members

/// </summary>

public List<GroupMember> GroupMembers { get; set; }

}

1. Update the details action in group controller:

public ActionResult Details(int? id)

{

if (id == null)

{

return new HttpStatusCodeResult(HttpStatusCode.BadRequest);

}

var group = db.Groups.Find(id);

if (group == null)

{

return HttpNotFound();

}

var groupView = new GroupView

{

Description = group.Description,

GroupId = group.GroupId,

GroupMembers = group.GroupMembers.ToList(),

};

return View(groupView);

}

1. Change the view:

@model Democracy.Models.GroupView

@{

ViewBag.Title = "Details";

}

<h2>Details</h2>

<div>

<h4>Group</h4>

<hr />

<dl class="dl-horizontal">

<dt>

@Html.DisplayNameFor(model => model.Description)

</dt>

<dd>

@Html.DisplayFor(model => model.Description)

</dd>

</dl>

</div>

<p>

@Html.ActionLink("Edit", "Edit", new { id = Model.GroupId }, new { @class = "btn btn-primary" })

@Html.ActionLink("Add Member", "AddMember", new { id = Model.GroupId }, new { @class = "btn btn-default" })

@Html.ActionLink("Back to List", "Index", new { }, new { @class = "btn btn-success" })

</p>

<h3>Members</h3>

@if (Model.GroupMembers.Count > 0)

{

<table class="table">

<tr>

<th>

@Html.DisplayNameFor(model => Model.GroupMembers[0].User.FirstName)

</th>

<th>

@Html.DisplayNameFor(model => Model.GroupMembers[0].User.LastName)

</th>

<th>

@Html.DisplayNameFor(model => Model.GroupMembers[0].User.UserName)

</th>

<th>

@Html.DisplayNameFor(model => Model.GroupMembers[0].User.Grade)

</th>

<th>

@Html.DisplayNameFor(model => Model.GroupMembers[0].User.Group)

</th>

<th></th>

</tr>

@for (int i = 0; i < Model.GroupMembers.Count; i++)

{

<tr>

<td>

@Html.DisplayFor(modelItem => Model.GroupMembers[i].User.FirstName)

</td>

<td>

@Html.DisplayFor(modelItem => Model.GroupMembers[i].User.LastName)

</td>

<td>

@Html.DisplayFor(modelItem => Model.GroupMembers[i].User.UserName)

</td>

<td>

@Html.DisplayFor(modelItem => Model.GroupMembers[i].User.Grade)

</td>

<td>

@Html.DisplayFor(modelItem => Model.GroupMembers[i].User.Group)

</td>

<td>

@Html.ActionLink("Delete", "DeleteMember",

new { id = Model.GroupMembers[i].GroupMemberId },

new { onclick = "return confirm('Are you want to delete this record?');", @class = "btn btn-danger" })

</td>

</tr>

}

</table>

}

else

{

<h4>No members yet</h4>

}

1. Add the read only property in user model:

[Display(Name = "Full name")]

public string FullName { get { return string.Format("{0} {1}", this.FirstName, this.LastName); } }

1. Add the action Add Member in group controller:

[HttpGet]

public ActionResult AddMember(int? id)

{

if (id == null)

{

return new HttpStatusCodeResult(HttpStatusCode.BadRequest);

}

var group = db.Groups.Find(id);

if (group == null)

{

return HttpNotFound();

}

ViewBag.UserId = new SelectList(db.Users.OrderBy(u => u.FirstName).ThenBy(u => u.LastName), "UserId", "FullName");

ViewBag.GroupName = group.Description;

var groupMember = new GroupMember

{

GroupId = group.GroupId,

};

return View(groupMember);

}

[HttpPost]

public ActionResult AddMember(GroupMember newGroupMember)

{

if (!ModelState.IsValid)

{

return View(newGroupMember);

}

var groupMember = db.GroupMembers

.Where(gm => gm.GroupId == newGroupMember.GroupId &&

gm.UserId == newGroupMember.UserId)

.FirstOrDefault();

if (groupMember != null)

{

var group = db.Groups.Find(newGroupMember.GroupId);

ViewBag.GroupName = group.Description;

ViewBag.Error = "User already belongs to group";

ViewBag.UserId = new SelectList(db.Users.OrderBy(u => u.FirstName).ThenBy(u => u.LastName), "UserId", "FullName");

return View(newGroupMember);

}

db.GroupMembers.Add(newGroupMember);

db.SaveChanges();

return RedirectToAction(string.Format("Details/{0}", newGroupMember.GroupId));

}

1. Add the view Add Member:

@model Democracy.Models.GroupMember

@{

ViewBag.Title = "AddMember";

}

<h2>Add Member</h2>

<h3>@ViewBag.Error</h3>

@using (Html.BeginForm())

{

@Html.AntiForgeryToken()

<div class="form-horizontal">

<h4>To group: @ViewBag.GroupName</h4>

<hr />

@Html.ValidationSummary(true)

@Html.HiddenFor(model => model.GroupId)

<div class="form-group">

@Html.LabelFor(model => model.UserId, "UserId", htmlAttributes: new { @class = "control-label col-md-2" })

<div class="col-md-10">

@Html.DropDownList("UserId", String.Empty)

@Html.ValidationMessageFor(model => model.UserId)

</div>

</div>

<div class="form-group">

<div class="col-md-offset-2 col-md-10">

<input type="submit" value="Create" class="btn btn-default" />

</div>

</div>

</div>

}

<div>

@Html.ActionLink("Back to List", "Index", new { }, new { @class = "btn btn-success" })

</div>

@section Scripts {

@Scripts.Render("~/bundles/jqueryval")

}

1. Add the action Delete Member:

[HttpGet]

public ActionResult DeleteMember(int? id)

{

if (id == null)

{

return new HttpStatusCodeResult(HttpStatusCode.BadRequest);

}

var groupMember = db.GroupMembers.Find(id);

if (groupMember == null)

{

return HttpNotFound();

}

db.GroupMembers.Remove(groupMember);

db.SaveChanges();

return RedirectToAction(string.Format("Details/{0}", groupMember.GroupId));

}

1. At the last, modify the index view, to show the count members per group:

<table class="table">

<tr>

<th>

@Html.DisplayNameFor(model => model.Description)

</th>

<th>

Members Quantity

</th>

<th></th>

</tr>

@foreach (var item in Model) {

<tr>

<td>

@Html.DisplayFor(modelItem => item.Description)

</td>

<td>

@Html.DisplayFor(modelItem => item.GroupMembers.Count)

</td>

<td>

@Html.ActionLink("Edit", "Edit", new { id = item.GroupId }, new { @class = "btn btn-info" })

@Html.ActionLink("Details", "Details", new { id = item.GroupId }, new { @class = "btn btn-warning" })

@Html.ActionLink("Delete", "Delete", new { id = item.GroupId }, new { @class = "btn btn-danger" })

</td>

</tr>

}

# ENABLE WEB TRACE

1. Add this line in Web.config in <system.web> section:

<trace enabled="true" requestLimit="50" localOnly="false"/>

1. Try catch the possible segment error (example):

try

{

con.Open();

var cmd = new SqlCommand(sql, con);

var adp = new SqlDataAdapter(cmd);

adp.Fill(dt);

var rpt = new ReportClass();

rpt.FileName = Server.MapPath("~/Reports/Users.rpt");

rpt.Load();

rpt.SetDataSource(dt);

return rpt;

}

catch (Exception ex)

{

ex.ToString();

HttpContext.Trace.Warn("ERROR: " + ex.ToString());

}

1. Now, shoot the error and write this in URL command:

<http://zulu-software.com/Democracy/Trace.axd>

And analyze the error

# CRYSTAL REPORTS IN APP PUBLISHED

When the application is published in WEB, does not work ☹. You need to change this properties in the RPT file, and the report magically works!



# CASCADE DROPDOWNS

1. Create the method to retrieve the data in the controller:

public JsonResult GetMunicipalities(int departmentId)

{

db.Configuration.ProxyCreationEnabled = false;

var municipalities = db.Municipalities.Where(m => m.DepartmentId == departmentId);

return Json(municipalities);

}

1. Add this section in Create and Edit view:

@section Scripts {

@Scripts.Render("~/bundles/jqueryval")

<script type="text/javascript">

$(document).ready(function () {

$("#DepartmentId").change(function () {

$("#MunicipalityId").empty();

$.ajax({

type: 'POST',

url: '@Url.Action("GetMunicipalities")',

dataType: 'json',

data: { departmentId: $("#DepartmentId").val() },

success: function (municipalities) {

$.each(municipalities, function (i, municipality) {

$("#MunicipalityId").append('<option value="'

+ municipality.MunicipalityId + '">'

+ municipality.Name + '</option>');

});

},

error: function (ex) {

alert('Failed to retrieve municipalities.' + ex);

}

});

return false;

})

});

</script>

}

1. To get the initial values in correct way, modify the create action:

public ActionResult Create()

{

ViewBag.DepartmentId = new SelectList(db.Departaments,

"DepartmentId", "Name");

ViewBag.MunicipalityId = new SelectList(db.Municipalities

.Where(m => m.DepartmentId == db.Departaments.FirstOrDefault().DepartmentId),

"MunicipalityId", "Name");

ViewBag.DocumentTypeId = new SelectList(db.DocumentTypes,

"DocumentTypeId", "Description");

return View();

}

And replace in the Edit views, the way to fill up the dropdown lists:

ViewBag.DepartmentId = new SelectList(db.Departaments,

"DepartmentId", "Name",

taxPaer.DepartmentId);

ViewBag.MunicipalityId = new SelectList(db.Municipalities

.Where(m => m.DepartmentId == taxPaer.DepartmentId),

"MunicipalityId", "Name",

taxPaer.MunicipalityId);

ViewBag.DocumentTypeId = new SelectList(db.DocumentTypes,

"DocumentTypeId", "Description",

taxPaer.DocumentTypeId);

# RECOVER & EMAIL PASSWORD

1. Add some values in the web.config file:

<appSettings>

<add key="webpages:Version" value="3.0.0.0" />

<add key="webpages:Enabled" value="false" />

<add key="ClientValidationEnabled" value="true" />

<add key="UnobtrusiveJavaScriptEnabled" value="true" />

<add key="AdminUser" value="taxesapplication@gmail.com"/>

<add key="AdminPassWord" value="Taxes123."/>

<add key="SMTPName" value="smtp.gmail.com"/>

<add key="SMTPPort" value="587"/>

</appSettings>

1. Modify the login view:

<p>

@Html.ActionLink("Forgot your password?", "ForgotPassword")

</p>

1. Add the method SendMail in Utilities class:

public static async Task SendMail(string to, string subject, string body)

{

var message = new MailMessage();

message.To.Add(new MailAddress(to));

message.From = new MailAddress(WebConfigurationManager.AppSettings["AdminUser"]);

message.Subject = subject;

message.Body = body;

message.IsBodyHtml = true;

using (var smtp = new SmtpClient())

{

var credential = new NetworkCredential

{

UserName = WebConfigurationManager.AppSettings["AdminUser"],

Password = WebConfigurationManager.AppSettings["AdminPassWord"]

};

smtp.Credentials = credential;

smtp.Host = WebConfigurationManager.AppSettings["SMTPName"];

smtp.Port = int.Parse(WebConfigurationManager.AppSettings["SMTPPort"]);

smtp.EnableSsl = true;

await smtp.SendMailAsync(message);

}

}

1. Add the method PasswordRecovery in Utilities class:

public static async Task PasswordRecovery(string email)

{

var userManager = new UserManager<ApplicationUser>(new UserStore<ApplicationUser>(userContext));

var userASP = userManager.FindByEmail(email);

if (userASP == null)

{

return;

}

var user = db.TaxPaers.Where(tp => tp.UserName == email).FirstOrDefault();

if (user == null)

{

return;

}

var random = new Random();

var newPassword = string.Format("{0}{1}{2:04}\*", user.FirstName.ToUpper().Substring(0, 1), user.LastName.ToLower(), random.Next(9999));

userManager.RemovePassword(userASP.Id);

userManager.AddPassword(userASP.Id, newPassword);

var subject = "Taxes Password Recovery";

var body = string.Format(@"

<h1>Taxes Password Recovery</h1>

<p>Yor new password is: <strong>{0}</strong></p>

<p>Please change it for one, that you remember easyly",

newPassword);

await SendMail(email, subject, body);

}

1. Modify the ForgotPassword action by:

[HttpPost]

[AllowAnonymous]

[ValidateAntiForgeryToken]

public async Task<ActionResult> ForgotPassword(ForgotPasswordViewModel model)

{

if (ModelState.IsValid)

{

var user = await UserManager.FindByNameAsync(model.Email);

if (user != null)

{

await Utilities.PasswordRecovery(model.Email);

return RedirectToAction("ForgotPasswordConfirmation", "Account");

}

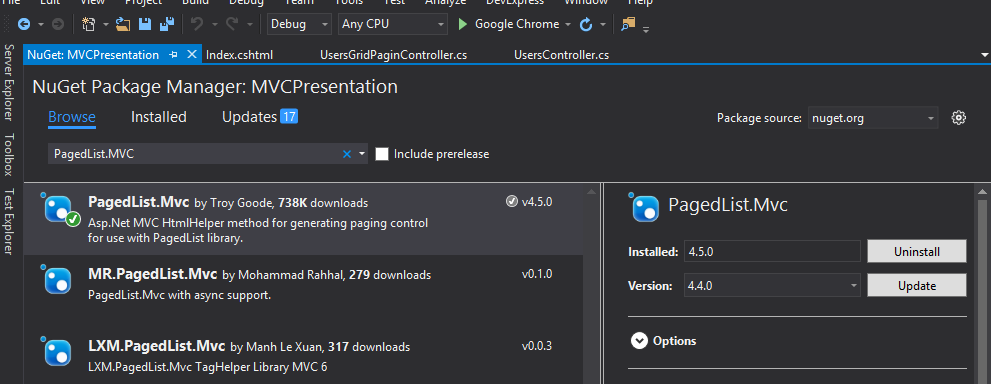
}

return View(model);

}

# PAGING

1. Add the nugget PagedList.MVC



1. Change the Index in TaxPaerController by (don’t forget add using PagedList;):

[Authorize(Roles = "Admin")]

public ActionResult Index(int? page = null)

{

page = (page ?? 1);

return View(db.TaxPaers

.OrderBy(tp => tp.FirstName)

.ThenBy(tp => tp.LastName)

.ToPagedList((int)page, 5));

}

1. Modify the view Index by:

@model PagedList.IPagedList<Taxes.Models.TaxPaer>

@using PagedList.Mvc;

@{

ViewBag.Title = "Tax Paers";

}

<h2>Tax Paers</h2>

<p>

@Html.ActionLink("Create New", "Create", new { }, new { @class = "btn btn-primary" })

</p>

<table class="table">

<tr>

<th>

@Html.DisplayNameFor(model => model.FirstOrDefault().DocumentType.Description)

</th>

<th>

@Html.DisplayNameFor(model => model.FirstOrDefault().FirstName)

</th>

<th>

@Html.DisplayNameFor(model => model.FirstOrDefault().LastName)

</th>

<th>

@Html.DisplayNameFor(model => model.FirstOrDefault().UserName)

</th>

<th>

@Html.DisplayNameFor(model => model.FirstOrDefault().Phone)

</th>

<th>

@Html.DisplayNameFor(model => model.FirstOrDefault().Document)

</th>

<th>

# Properties

</th>

<th></th>

</tr>

@foreach (var item in Model) {

<tr>

<td>

@Html.DisplayFor(modelItem => item.DocumentType.Description)

</td>

<td>

@Html.DisplayFor(modelItem => item.FirstName)

</td>

<td>

@Html.DisplayFor(modelItem => item.LastName)

</td>

<td>

@Html.DisplayFor(modelItem => item.UserName)

</td>

<td>

@Html.DisplayFor(modelItem => item.Phone)

</td>

<td>

@Html.DisplayFor(modelItem => item.Document)

</td>

<td>

@Html.DisplayFor(modelItem => item.Properties.Count)

</td>

<td>

@Html.ActionLink("Edit", "Edit", new { id = item.TaxPaerId }, new { @class = "btn btn-warning" })

@Html.ActionLink("Details", "Details", new { id=item.TaxPaerId }, new { @class = "btn btn-info" })

@Html.ActionLink("Delete", "Delete", new { id=item.TaxPaerId }, new { @class = "btn btn-danger" })

</td>

</tr>

}

</table>

Página: @(Model.PageCount < Model.PageNumber ? 0 : Model.PageNumber), de: @Model.PageCount

@Html.PagedListPager(Model, page => Url.Action("Index", new

{

page,

sortOrder =

ViewBag.CurrentSort,

currentFilter = ViewBag.CurrentFilter

}))

# FILTERS IN VIEW

1. Create the model MunicipalitiesView

public class MunicipalitiesView

{

public string Department { get; set; }

public string Municipality { get; set; }

public List<Municipality> Municipalities { get; set; }

}

1. Modify the action Index:

public ActionResult Index()

{

var municipalities = db.Municipalities

.Include(m => m.Departament)

.OrderBy(m => m.Departament.Name)

.ThenBy(m => m.Name)

.ToList();

var view = new MunicipalitiesView

{

Municipalities = municipalities,

};

return View(view);

}

1. Modify the index view:

@model Taxes.Models.MunicipalitiesView

@{

ViewBag.Title = "Municipalities";

}

<h2>Municipalities</h2>

@using (Html.BeginForm())

{

<table>

<tr>

<td>

@Html.LabelFor(model => model.Department, htmlAttributes: new { @class = "control-label col-md-2" })

</td>

<td>

@Html.EditorFor(model => model.Department, new { htmlAttributes = new { @class = "form-control" } })

</td>

<td>

@Html.LabelFor(model => model.Municipality, htmlAttributes: new { @class = "control-label col-md-2" })

</td>

<td>

@Html.EditorFor(model => model.Municipality, new { htmlAttributes = new { @class = "form-control" } })

</td>

<td>

<input type="submit" value="Filter" class="btn btn-info" />

@Html.ActionLink("Create New", "Create", new { }, new { @class = "btn btn-primary" })

</td>

</tr>

</table>

}

<br />

<table class="table">

<tr>

<th>

@Html.DisplayNameFor(model => model.Municipalities.FirstOrDefault().Departament.Name)

</th>

<th>

@Html.DisplayNameFor(model => model.Municipalities.FirstOrDefault().Name)

</th>

<th></th>

</tr>

@foreach (var item in Model.Municipalities) {

<tr>

<td>

@Html.DisplayFor(modelItem => item.Departament.Name)

</td>

<td>

@Html.DisplayFor(modelItem => item.Name)

</td>

<td>

@Html.ActionLink("Edit", "Edit", new { id = item.MunicipalityId }, new { @class = "btn btn-warning" })

@Html.ActionLink("Details", "Details", new { id=item.MunicipalityId }, new { @class = "btn btn-info" })

@Html.ActionLink("Delete", "Delete", new { id=item.MunicipalityId }, new { @class = "btn btn-danger" })

</td>

</tr>

}

</table>

1. Add the Index post:

[HttpPost]

public ActionResult Index(MunicipalitiesView view)

{

var municipalities = db.Municipalities

.Include(m => m.Departament)

.OrderBy(m => m.Departament.Name)

.ThenBy(m => m.Name)

.ToList();

if (!string.IsNullOrEmpty(view.Department))

{

municipalities = municipalities.Where(m => m.Departament.Name.ToUpper().Contains(view.Department.ToUpper())).ToList();

}

if (!string.IsNullOrEmpty(view.Municipality))

{

municipalities = municipalities.Where(m => m.Name.ToUpper().Contains(view.Municipality.ToUpper())).ToList();

}

view.Municipalities = municipalities;

return View(view);

}

Para probar, mandar el origen de datos de un Cristal Report desde EF:

private ReportClass GenerateUserReport() { var Users = db.Users.ToList(); var report = new ReportClass(); report.FileName = Server.MapPath("~/Reports/CrystalReportUsers.rpt"); report.Load(); report.SetDataSource(Users); return report; }﻿

# MAIL HELPER

1. Add those keys to web.config y appSettings section:

<add key="AdminUser" value="taxesapplication@gmail.com" />

<add key="AdminPassWord" value="Taxes123." />

<add key="SMTPName" value="smtp.gmail.com" />

<add key="SMTPPort" value="587" />

1. Add the mail helper class:

public static async Task SendMail(string to, string subject, string body)

{

var message = new MailMessage();

message.To.Add(new MailAddress(to));

message.From = new MailAddress(WebConfigurationManager.AppSettings["AdminUser"]);

message.Subject = subject;

message.Body = body;

message.IsBodyHtml = true;

using (var smtp = new SmtpClient())

{

var credential = new NetworkCredential

{

UserName = WebConfigurationManager.AppSettings["AdminUser"],

Password = WebConfigurationManager.AppSettings["AdminPassWord"]

};

smtp.Credentials = credential;

smtp.Host = WebConfigurationManager.AppSettings["SMTPName"];

smtp.Port = int.Parse(WebConfigurationManager.AppSettings["SMTPPort"]);

smtp.EnableSsl = true;

await smtp.SendMailAsync(message);

}

}

public static async Task SendMail(List<string> mails, string subject, string body)

{

var message = new MailMessage();

foreach (var to in mails)

{

message.To.Add(new MailAddress(to));

}

message.From = new MailAddress(WebConfigurationManager.AppSettings["AdminUser"]);

message.Subject = subject;

message.Body = body;

message.IsBodyHtml = true;

using (var smtp = new SmtpClient())

{

var credential = new NetworkCredential

{

UserName = WebConfigurationManager.AppSettings["AdminUser"],

Password = WebConfigurationManager.AppSettings["AdminPassWord"]

};

smtp.Credentials = credential;

smtp.Host = WebConfigurationManager.AppSettings["SMTPName"];

smtp.Port = int.Parse(WebConfigurationManager.AppSettings["SMTPPort"]);

smtp.EnableSsl = true;

await smtp.SendMailAsync(message);

}

}

# USER HELPER

1. Add the user helper class:

public class UsersHelper : IDisposable

{

private static ApplicationDbContext userContext = new ApplicationDbContext();

private static ECommerceContext db = new ECommerceContext();

public static void CheckRole(string roleName)

{

var roleManager = new RoleManager<IdentityRole>(new RoleStore<IdentityRole>(userContext));

// Check to see if Role Exists, if not create it

if (!roleManager.RoleExists(roleName))

{

roleManager.Create(new IdentityRole(roleName));

}

}

public static void CheckSuperUser()

{

var userManager = new UserManager<ApplicationUser>(new UserStore<ApplicationUser>(userContext));

var email = WebConfigurationManager.AppSettings["AdminUser"];

var password = WebConfigurationManager.AppSettings["AdminPassWord"];

var userASP = userManager.FindByName(email);

if (userASP == null)

{

CreateUserASP(email, "Admin", password);

return;

}

userManager.AddToRole(userASP.Id, "Admin");

}

public static void CreateUserASP(string email, string roleName)

{

var userManager = new UserManager<ApplicationUser>(new UserStore<ApplicationUser>(userContext));

var userASP = new ApplicationUser

{

Email = email,

UserName = email,

};

userManager.Create(userASP, email);

userManager.AddToRole(userASP.Id, roleName);

}

public static void CreateUserASP(string email, string roleName, string password)

{

var userManager = new UserManager<ApplicationUser>(new UserStore<ApplicationUser>(userContext));

var userASP = new ApplicationUser

{

Email = email,

UserName = email,

};

userManager.Create(userASP, password);

userManager.AddToRole(userASP.Id, roleName);

}

public static async Task PasswordRecovery(string email)

{

var userManager = new UserManager<ApplicationUser>(new UserStore<ApplicationUser>(userContext));

var userASP = userManager.FindByEmail(email);

if (userASP == null)

{

return;

}

var user = db.TaxPaers.Where(tp => tp.UserName == email).FirstOrDefault();

if (user == null)

{

return;

}

var random = new Random();

var newPassword = string.Format("{0}{1}{2:04}\*",

user.FirstName.Trim().ToUpper().Substring(0, 1),

user.LastName.Trim().ToLower(),

random.Next(10000));

userManager.RemovePassword(userASP.Id);

userManager.AddPassword(userASP.Id, newPassword);

var subject = "Taxes Password Recovery";

var body = string.Format(@"

<h1>Taxes Password Recovery</h1>

<p>Yor new password is: <strong>{0}</strong></p>

<p>Please change it for one, that you remember easyly",

newPassword);

await MailHelper.SendMail(email, subject, body);

}

public void Dispose()

{

userContext.Dispose();

db.Dispose();

}

}

# USER MANAGEMENT

1. Add the user helper class:

public class UsersHelper : IDisposable

{

private static ApplicationDbContext userContext = new ApplicationDbContext();

private static ECommerceContext db = new ECommerceContext();

public static void CheckRole(string roleName)

{

var roleManager = new RoleManager<IdentityRole>(new RoleStore<IdentityRole>(userContext));

// Check to see if Role Exists, if not create it

if (!roleManager.RoleExists(roleName))

{

roleManager.Create(new IdentityRole(roleName));

}

}

public static void CheckSuperUser()

{

var userManager = new UserManager<ApplicationUser>(new UserStore<ApplicationUser>(userContext));

var email = WebConfigurationManager.AppSettings["AdminUser"];

var password = WebConfigurationManager.AppSettings["AdminPassWord"];

var userASP = userManager.FindByName(email);

if (userASP == null)

{

CreateUserASP(email, "Admin", password);

return;

}

userManager.AddToRole(userASP.Id, "Admin");

}

public static void CreateUserASP(string email, string roleName)

{

var userManager = new UserManager<ApplicationUser>(new UserStore<ApplicationUser>(userContext));

var userASP = new ApplicationUser

{

Email = email,

UserName = email,

};

userManager.Create(userASP, email);

userManager.AddToRole(userASP.Id, roleName);

}

public static void CreateUserASP(string email, string roleName, string password)

{

var userManager = new UserManager<ApplicationUser>(new UserStore<ApplicationUser>(userContext));

var userASP = new ApplicationUser

{

Email = email,

UserName = email,

};

userManager.Create(userASP, password);

userManager.AddToRole(userASP.Id, roleName);

}

public static async Task PasswordRecovery(string email)

{

var userManager = new UserManager<ApplicationUser>(new UserStore<ApplicationUser>(userContext));

var userASP = userManager.FindByEmail(email);

if (userASP == null)

{

return;

}

var user = db.Users.Where(tp => tp.UserName == email).FirstOrDefault();

if (user == null)

{

return;

}

var random = new Random();

var newPassword = string.Format("{0}{1}{2:04}\*",

user.FirstName.Trim().ToUpper().Substring(0, 1),

user.LastName.Trim().ToLower(),

random.Next(10000));

userManager.RemovePassword(userASP.Id);

userManager.AddPassword(userASP.Id, newPassword);

var subject = "Taxes Password Recovery";

var body = string.Format(@"

<h1>Taxes Password Recovery</h1>

<p>Yor new password is: <strong>{0}</strong></p>

<p>Please change it for one, that you remember easyly",

newPassword);

await MailHelper.SendMail(email, subject, body);

}

public void Dispose()

{

userContext.Dispose();

db.Dispose();

}

}

1. In the global.asax create the roles and super user:

private void CheckRolesAndSuperUser()

{

UsersHelper.CheckRole("Admin");

UsersHelper.CheckRole("User");

UsersHelper.CheckSuperUser();

}

1. When creates a new user, create the user as ASP User:

db.SaveChanges();

UsersHelper.CreateUserASP(user.UserName, "User");

# TO IDENTIFICATE MODEL ERRORS

try

{

db.SaveChanges();

}

catch (DbEntityValidationException e)

{

foreach (var eve in e.EntityValidationErrors)

{

Console.WriteLine("Entity of type \"{0}\" in state \"{1}\" has the following validation errors:",

eve.Entry.Entity.GetType().Name, eve.Entry.State);

foreach (var ve in eve.ValidationErrors)

{

Console.WriteLine("- Property: \"{0}\", Error: \"{1}\"",

ve.PropertyName, ve.ErrorMessage);

}

}

throw;

}

# IMPROVE FILE PICKER

1. Create in folder scripts the file: “fileupload.js”, with the following code:

$(document).ready(function () {

$("#files").on("change", handleFileSelect);

});

function handleFileSelect(e) {

var files = e.target.files;

var filesArr = Array.prototype.slice.call(files);

filesArr.forEach(function (f, item) {

if (f.type.match("image.\*")) {

var reader = new FileReader();

reader.readAsDataURL(f);

$("#NombreArchivo").empty();

$("#NombreArchivo").attr("title", f.name);

$("#NombreArchivo").append("<span class='glyphicon glyphicon-file kv-caption-icon' style='display:inline-block'></span>" + f.name);

}

else {

alert(f.name + ' no esta permitido cargarlo');

return;

}

});

}

1. Add this lines to “boostrap.css”:

.file-object {

margin: 0 0 -5px 0;

padding: 0;

}

.btn-file {

position: relative;

overflow: hidden;

}

.btn-file input[type=file] {

position: absolute;

top: 0;

right: 0;

min-width: 100%;

min-height: 100%;

text-align: right;

opacity: 0;

background: none repeat scroll 0 0 transparent;

cursor: inherit;

display: block;

}

.file-caption-name {

display: inline-block;

word-break: break-all;

display: inline-block;

height:auto;

}

.input-group-lg .file-caption-name {

height: auto;

}

.file-caption-disabled {

background-color: #EEEEEE;

cursor: not-allowed;

opacity: 1;

}

.file-actions, .file-other-error {

text-align: left;

}

.file-icon-lg {

font-size: 1.2em;

}

.file-icon-2x {

font-size: 2.4em;

}

.file-icon-4x {

font-size: 4.8em;

}

.file-input-new .file-preview, .file-input-new .close, .file-input-new .glyphicon-file,

.file-input-new .fileinput-remove-button, .file-input-new .fileinput-upload-button,

.file-input-ajax-new .fileinput-remove-button, .file-input-ajax-new .fileinput-upload-button {

display: none;

}

.file-actions {

margin-top: 15px;

}

.highlighted {

border: 2px dashed #999 !important;

background-color: #f0f0f0;

}

1. Register the new java script in “BundleConfig.cs”:

bundles.Add(new ScriptBundle("~/bundles/bootstrap").Include(

"~/Scripts/bootstrap.js",

"~/Scripts/respond.js",

"~/Scripts/fileupload.js"));

1. Change the file picker in the view:

<div class="form-group">

@Html.LabelFor(model => model.LogoFile, htmlAttributes: new { @class = "control-label col-md-2" })

<div class="col-md-10">

<div class="file-input-new">

<div class="input-group" style="width:280px">

<div tabindex="500" class="form-control file-caption">

<div class="file-caption-name" id="NombreArchivo">

</div>

</div>

<div class="input-group-btn" style="height:auto">

<div tabindex="500" class="btn btn-primary btn-file">

<i class="glyphicon glyphicon-folder-open"></i>

File Search...

@Html.TextBoxFor(modelo => modelo.LogoFile, new { type = "file", id = "files" })

</div>

</div>

</div>

</div>

</div>

</div>