PRACTICAL 15

Aim: Develop ASP.NET Core MVC Forms application to provide Create, Read, Update and Delete functionality.

Code:
Add Entity Framework Core and Tools
>> dotnet add package Microsoft.EntityFrameworkCore.Sqlite
>> dotnet add package Microsoft.EntityFrameworkCore.SqlServer
>> dotnet add package Microsoft.EntityFrameworkCore.Tools

AppDbContext.cs : (Data / AppDbContext.cs)

```
using Microsoft.EntityFrameworkCore;
using PRACTICAL15.Models;
namespace PRACTICAL15.Data {
    public class AppDbContext : DbContext {
        public AppDbContext(DbContextOptions<AppDbContext> options) : base(options) {
        }
        public DbSet<Item> Items { get; set; }
    }
}
```

Item.cs : (Models / Item.cs)

```
using System.ComponentModel.DataAnnotations.Schema;
namespace PRACTICAL15.Models {
    public class Item {
        public int Id { get; set; }
        public string Name { get; set; } = string.Empty;
        public string Description { get; set; } = string.Empty;
        [Column(TypeName = "decimal(18,2)")]
        public decimal Price { get; set; }
    }
}
```

Configure Database in 'appsettings.json' :

```
"ConnectionStrings": {
  "DefaultConnection": "Data Source=PRACTICAL15.db"
},
```

Program.cs :

```
builder.Services.AddDbContext<AppDbContext>(options =>
options.UseSqlite(builder.Configuration.GetConnectionString("DefaultConnection")));
```

Add Migrations and Update Database :
>> dotnet ef migrations add InitialCreate
>> dotnet ef database update

HomeController.cs : (Controllers / HomeController.cs)

```
using Microsoft.AspNetCore.Mvc;
using PRACTICAL15.Models;
using PRACTICAL15.Data;
using System.Linq;
namespace PRACTICAL15.Controllers {
    public class HomeController : Controller {
        private readonly AppDbContext _context;
        public HomeController(AppDbContext context) {
            _context = context;
        }
        public IActionResult Index() {
            var items = _context.Items.ToList();
            return View(items);
        }
        [HttpGet]
        public IActionResult Create() {
            return View();
        }
        [HttpPost]
        public IActionResult Create(Item item) {
            if (ModelState.IsValid) {
                _context.Items.Add(item);
                _context.SaveChanges();
                return RedirectToAction(nameof(Index));
            }
            return View(item);
        }
        [HttpGet]
        public IActionResult Edit(int id) {
            var item = _context.Items.Find(id);
            if (item == null) return NotFound();
            return View(item);
        }
        [HttpPost]
        public IActionResult Edit(Item item) {
            if (ModelState.IsValid) {
                _context.Items.Update(item);
                _context.SaveChanges();
```

```
            return RedirectToAction(nameof(Index));
        }
        return View(item);
    }
    [HttpGet]
    public IActionResult Delete(int id) {
        var item = _context.Items.Find(id);
        if (item == null) return NotFound();
        return View(item);
    }
    [HttpPost, ActionName("DeleteConfirmed")]
    public IActionResult DeleteConfirmed(int id) {
        var item = _context.Items.Find(id);
        if (item == null) return NotFound();
        _context.Items.Remove(item);
        _context.SaveChanges();
        return RedirectToAction(nameof(Index));
    }
  }
}
```

Index.cshtml : (Views / Home / Index.cshtml)
```
@model IEnumerable<PRACTICAL15.Models.Item>
<div class="table-container">
    <center><h2>ITEMS LIST</h2></center>
    <table>
        <thead>
            <tr>
                <th>ID</th>
                <th>Name</th>
                <th>Description</th>
                <th>Price</th>
                <th style="width: 150px;">Actions</th>
            </tr>
        </thead>
        <tbody>
            @foreach (var item in Model) {
                <tr>
                    <td>@item.Id</td>
                    <td>@item.Name</td>
                    <td>@item.Description</td>
                    <td>$@item.Price</td>
                    <td>
```

```
                <a asp-action="Edit" asp-route-id="@item.Id" class="btn btn-sm btn-primary
mx-1">
                    <i class="fas fa-edit"></i> Edit
                </a>
                <a asp-action="Delete" asp-route-id="@item.Id" class="btn btn-sm
btn-danger mx-1">
                    <i class="fas fa-trash"></i> Delete
                </a>
            </td>
          </tr>
        }
      </tbody>
    </table>
    <a href="@Url.Action("Create")">
      <button>Create New Item</button>
    </a>
</div>
```

Create.cshtml : (Views / Home / Create.cshtml)

```
@model PRACTICAL15.Models.Item
@{
    ViewData["Title"] = "Create Item";
}
<h2 class="text-center">CREATE ITEM</h2>
<div class="container"><br>
    <div class="row justify-content-center">
        <div class="col-md-6">
            <form asp-action="Create" method="post">
                <div class="form-group row">
                    <label asp-for="Name" class="col-sm-4 col-form-label"></label>
                    <div class="col-sm-8">
                        <input asp-for="Name" class="form-control" />
                        <span asp-validation-for="Name" class="text-danger"></span>
                    </div>
                </div><br>
                <div class="form-group row">
                    <label asp-for="Description" class="col-sm-4 col-form-label"></label>
                    <div class="col-sm-8">
                        <input asp-for="Description" class="form-control" />
                        <span asp-validation-for="Description" class="text-danger"></span>
                    </div>
                </div><br>
                <div class="form-group row">
                    <label asp-for="Price" class="col-sm-4 col-form-label"></label>
```

```html
            <div class="col-sm-8">
               <input asp-for="Price" class="form-control" />
               <span asp-validation-for="Price" class="text-danger"></span>
            </div>
         </div><br>
         <div class="form-group text-center">
            <input type="submit" value="Create" class="btn btn-primary" />
         </div>
      </form>
   </div>
  </div>
</div>
```

Edit.cshtml : (Views / Home / Edit.cshtml)

```html
@model PRACTICAL15.Models.Item
@{
   ViewData["Title"] = "Edit Item";
}
<center>
   <h2 class="text-center">EDIT ITEMS</h2>
   <div class="container2"><br>
      <form asp-action="Edit" method="post" class="form-group">
         <div class="form-group row">
            <label asp-for="Id" class="col-sm-2 col-form-label"></label>
            <div class="col-sm-10">
               <input asp-for="Id" class="form-control" readonly />
            </div>
         </div><br>
         <div class="form-group row">
            <label asp-for="Name" class="col-sm-2 col-form-label"></label>
            <div class="col-sm-10">
               <input asp-for="Name" class="form-control" />
               <span asp-validation-for="Name" class="text-danger"></span>
            </div>
         </div><br>
         <div class="form-group row">
            <label asp-for="Description" class="col-sm-2 col-form-label"></label>
            <div class="col-sm-10">
               <textarea asp-for="Description" class="form-control"></textarea>
               <span asp-validation-for="Description" class="text-danger"></span>
            </div>
         </div><br>
         <div class="form-group row">
            <label asp-for="Price" class="col-sm-2 col-form-label"></label>
```

```
            <div class="col-sm-10">
                <input asp-for="Price" class="form-control" />
                <span asp-validation-for="Price" class="text-danger"></span>
            </div>
        </div>
        <div class="form-group row">
            <div class="col-sm-12 text-center">
                <button type="submit" class="btn btn-primary">Save Changes</button>
            </div>
        </div>
    </form>
</div>
<div>
    <a asp-controller="Home" asp-action="Index">Back To The List</a>
</div>
</center>
@section Scripts {
    @{await Html.RenderPartialAsync("_ValidationScriptsPartial");}
}
```

Delete.cshtml : (Views / Home / Delete.cshtml)

```
@model PRACTICAL15.Models.Item
<h2>DELTE ITEMS</h2>
<h3>Are you sure you want to delete this item?</h3>
<div>
    <pre><b>Name</b>        @Model.Name</pre>
    <pre><b>Desciption</b>   @Model.Description</pre>
    <pre><b>Price</b>        @Model.Price</pre>
    <form asp-action="DeleteConfirmed">
        <input type="hidden" asp-for="Id" />
        <button type="submit" class="btn btn-danger">Delete</button>
        <a asp-action="Index" class="btn btn-secondary">Cancel</a>
    </form>
</div>
```

site.css : (Views / wwwroot / css / site.css)

```
.table-container {
  margin: 20px auto;
  max-width: 800px;
}
table {
  width: 100%;
  border-collapse: collapse;
  margin: 20px 0;
}
```

```css
th, td {
  border: 1px solid #ddd;
  padding: 12px;
  text-align: center;
}
th {
  background-color: #f2f2f2;
  font-weight: bold;
}
button {
  display: block;
  margin: 20px auto;
  padding: 10px 15px;
  background-color: black;
  color: white;
  border: none;
  border-radius: 5px;
  cursor: pointer;
  text-decoration: none;
}
a {
  text-decoration: none;
}
.container2 {
  max-width: 600px;
}
.footer{
  text-align: start;
  position: relative;
}
```

Enrollment No: 202203103510097

Output:

Enrollment No: 202203103510097

localhost:5133/Home/Edit/3

PRACTICAL15   Home   Privacy

EDIT ITEMS

Id	3
Name	Rolls-Royce Phantom
Description	A symbol of ultimate luxury, known for its handcrafted design and unmatched comfort.
Price	550000.00

Save Changes

Back To The List

© 2024 – PRACTICAL15(097) – Privacy

---

localhost:5133/Home/Delete/6

PRACTICAL15   Home   Privacy

DELTE ITEMS

Are you sure you want to delete this item?

Name   Ferrari LaFerrari

Desciption   A hybrid supercar with exceptional speed and performance, limited edition model.

Price   1500000

Delete   Cancel

© 2024 – PRACTICAL15(097) – Privacy