

ApplicationDbContext.cs

```
using System;

using System.Collections.Generic;

using System.Data.Entity;

using System.Linq;

using System.Web;

using Laptop_Ecommerce.Models;

namespace Laptop_Ecommerce.Data

{

    public class ApplicationDbContext : DbContext

    {

        public ApplicationDbContext() : base("DefaultConnection") {}

        public static ApplicationDbContext Create()

        {

            return new ApplicationDbContext();

        }

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

    }

}
```

CartItemModel

```
using System;

using System.Collections.Generic;
```

```
using System.Linq;

using System.Web;


namespace Laptop_Ecommerce.Models
{
    public class CartItemModel
    {
        public int ProductId { get; set; }

        public string UserId { get; set; } // User Id

        public string ProductName { get; set; }

        public int Quantity { get; set; }

        public decimal Price { get; set; }

        public string ImageUrl { get; set; }

    }
}
```

Product Model

```
using System;

using System.Collections.Generic;

using System.Linq;

using System.Web;


namespace Laptop_Ecommerce.Models
{
    public class ProductModel
    {
        public int Id { get; set; }
```

```

        public string Name { get; set; }

        public string Description { get; set; }

        public int Price { get; set; }

        public string ImageUrl { get; set; }

    }
}

```

Home Controller

```

using System;

using System.Collections.Generic;

using System.Linq;

using System.Web;

using System.Web.Mvc;

using Laptop_Ecommerce.Models;

using Microsoft.AspNet.Identity;

```

```

namespace Laptop_Ecommerce.Controllers

```

```

{

    public class HomeController : Controller

    {

        private Data.ApplicationDbContext _dbContext = new Data.ApplicationDbContext();

        public ActionResult Index()

        {

            List<ProductModel> products = _dbContext.Product.ToList();

            return View(products);

            //return View();

```

```
}
```

```
//public ActionResult About()
```

```
//{
```

```
//    ViewBag.Message = "Your application description page.";
```

```
//    return View();
```

```
//}
```

```
public ActionResult Contact()
```

```
{
```

```
    ViewBag.Message = "Your contact page.";
```

```
    return View();
```

```
}
```

```
//checkout
```

```
public ActionResult Checkout()
```

```
{
```

```
    ViewBag.Message = "Your checkout page.";
```

```
    return View();
```

```
}
```

```
//cart
```

```
private CartService GetCartService()
```

```
{  
    // Retrieve the cartService from Owin context  
    return System.Web.HttpContext.Current.GetOwinContext().Get<CartService>("CartService");  
}
```

```
private readonly CartService cartService;
```

```
public ActionResult Cart()
```

```
{  
    // Ensure the user is logged in  
    if (!User.Identity.IsAuthenticated)  
    {  
        return RedirectToAction("Login", "Account"); // Redirect to login if not logged in  
    }  
}
```

```
var cartService = GetCartService();
```

```
if (cartService == null)  
{  
    return View(new List<CartItemModel>()); // Return an empty cart for now  
}
```

```
var userId = User.Identity.GetUserId();
```

```
var cartItems = cartService.GetCartItems(userId);
```

```
return View(cartItems);
```

```
}
```

```
}  
}
```

Products Controller

```
using System;  
using System.Collections.Generic;  
using System.Linq;  
using System.Web;  
using System.Web.Mvc;  
using Laptop_Ecommerce.Models;  
using Microsoft.AspNet.Identity;  
using ApplicationDbContext = Laptop_Ecommerce.Data.ApplicationDbContext;
```

```
namespace Laptop_Ecommerce.Controllers
```

```
{
```

```
    public class ProductsController : Controller
```

```
    {
```

```
        private ApplicationDbContext _dbContext = new ApplicationDbContext();
```

```
        private readonly CartService cartService;
```

```
        public ProductsController()
```

```
        {
```

```
            // Get the cartService from the Owin context
```

```
            var context = System.Web.HttpContext.Current.GetOwinContext();
```

```
            cartService = context.Get<CartService>("CartService");
```

```
        }
```

```
public ActionResult Details(int id)
{
    var product = _dbContext.Product.FirstOrDefault(p => p.Id == id);

    if (product == null)
    {
        return HttpNotFound(); // Or any other appropriate action for a not found product
    }

    return View(product);
}
```

```
public ActionResult AddToCart(int id, int quantity)
{
    var product = _dbContext.Product.FirstOrDefault(p => p.Id == id);

    if (product == null)
    {
        return HttpNotFound(); // Or any other appropriate action for a not found product
    }
}
```

```
var cartService = HttpContext.GetOwinContext().Get<CartService>("CartService");
```

```

if (cartService == null)
{
    // Handle null cartService, perhaps log the error or return an error response
    return Json(new { success = false, message = "Cart service is not available." });
}

var cartItem = new CartItemModel
{
    ProductId = product.Id,
    UserId = User.Identity.GetUserId(),
    ProductName = product.Name,
    Quantity = quantity, // Initial quantity
    Price = product.Price,
    ImageUrl=product.ImageUrl,
};

cartService.AddToCart(cartItem);

return Json(new { success = true, message = "Product added to cart successfully!" });
}
}
}

```

Cart Service.cs

```

using System.Collections.Generic;
using System.Linq;

```



```
using Laptop_Ecommerce.Models;
```

```
public class CartService
```

```
{
```

```
    private Dictionary<string, List<CartItemModel>> userCarts = new Dictionary<string, List<CartItemModel>>();
```

```
    public void AddToCart(CartItemModel item)
```

```
    {
```

```
        if (!userCarts.ContainsKey(item.UserId))
```

```
            userCarts[item.UserId] = new List<CartItemModel>();
```

```
        // Check if the item already exists in the cart for this user
```

```
        var existingItem = userCarts[item.UserId].FirstOrDefault(i => i.ProductId == item.ProductId);
```

```
        if (existingItem != null)
```

```
        {
```

```
            existingItem.Quantity += item.Quantity;
```

```
        }
```

```
        else
```

```
        {
```

```
            userCarts[item.UserId].Add(item);
```

```
        }
```

```
    }
```

```
    public List<CartItemModel> GetCartItems(string userId)
```

```
    {
```

```
        if (userCarts.ContainsKey(userId))
```

```
            return userCarts[userId];
```

```
        return new List<CartItemModel>();  
    }  
}
```

Cart.cshtml

```
@{  
    ViewBag.Title = "Cart";  
}  
  
@model List<Laptop_Ecommerce.Models.CartItemModel>
```

```
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css">
```

```
<h2>Cart</h2>
```

```
<div class="container" style="background-color:white">
```

```
    <table class="table">
```

```
        <thead>
```

```
            <tr>
```

```
                <th>Product Image</th>
```

```
                <th>Product Name</th>
```

```
                <th>Quantity</th>
```

```
                <th>Price</th>
```

```
                <th>Total</th>
```

```

        </tr>

    </thead>

    <tbody>

        @foreach (var item in Model)
        {
            <tr>

                <td style="width: 150px;"></td>

                <td>@item.ProductName</td>

                <td>@item.Quantity</td>

                <td>$@item.Price</td>

                <td>$@(item.Quantity * item.Price)</td>

            </tr>
        }

        <tr>

            <td colspan="4" class="text-right"><strong>Total Cost:</strong></td>

            <td>$@Model.Sum(item => item.Quantity * item.Price)</td>

        </tr>

    </tbody>

</table>

    <button style="padding-right:10px," class="btn btn-primary float-right"
onclick="redirectToCheckout()">Checkout</button>

</div>

<script>

    function redirectToCheckout() {

```

```
        window.location.href = '@Url.Action("Checkout", "Home")';  
    }  
</script>
```

Checkout.cshtml

```
@{  
    ViewBag.Title = "Checkout";  
}  
  
<h2>Checkout</h2>  
  
<div>  
    <!-- Your checkout content goes here -->  
    <p>Thank you for shopping with us!</p>  
</div>
```

Index.cshtml

```
@{  
    ViewBag.Title = "Index";  
}
```

```
@model List<Laptop_Ecommerce.Models.ProductModel>
```

```
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css">
```

```
<link rel="stylesheet" href="~/Views/Home/index.css">
```

```
<div class="container">
```

```
<div class="row">
```

```
@foreach (var product in Model)
```

```
{
```

```
<div class="col-md-4">
```

```
<div class="card product-item">
```

```
<a style="text-decoration:none" href="@Url.Action("Details", "Products", new { id =  
product.Id })">
```

```

```

```
<div class="card-body">
```

```
<h5 class="card-title">@product.Name</h5>
```

```
@*<p class="card-text">@product.Description</p>*@
```

```
<p class="card-text">$@product.Price</p>
```

```
</div>
```

```
</a>
```

```
</div>
```

```
</div>
```

```
}
```

```
</div>
```

```
</div>
```

```
<style>
```

```
.product-item {  
    border: 1px solid #ccc;  
    padding: 10px;  
}
```

```
.product-item {  
    border: 1px solid #ccc;  
    border-radius: 12px;  
    box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);  
    transition: box-shadow 0.3s ease;  
    background-color: rgba(255, 255, 255, 0.8); /* Adjust transparency */  
    padding: 15px;  
    margin-bottom: 50px;  
}
```

```
.product-item:hover {  
    box-shadow: 0 8px 16px rgba(0, 0, 0, 0.2);  
}
```

```
.container {  
    padding: 20px 0;  
}
```

```
/* Override default hyperlink styles */  
a {  
    color: inherit; /* Use the parent element's color */  
    text-decoration: none; /* Remove underline */  
}
```

```
a:hover {  
    color: inherit; /* Use the parent element's color */  
    text-decoration: none; /* Remove underline on hover */  
}
```

```
</style>
```

Details.cshtml

```
@{
```

```
    ViewBag.Title = "Details";
```

```
}
```

```
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css">
```

```
<link rel="stylesheet" href="~/Views/Products/Detailstyle.css">
```

```
<div class="row">
```

```
    <div class="col-md-6">
```

```
        <div class="card product-image-card">
```

```
            
```

```
        </div>
```

```
    </div>
```

```
    <div class="col-md-6">
```

```
<div class="product-details">

  <h2 class="product-name">@Model.Name</h2>

  <p class="product-price">Price: $@Model.Price</p>

  <div class="form-group product-quantity">

    <label for="quantity">Quantity:</label>

    <input type="number" class="form-control" id="quantity" value="1" min="1">

  </div>

  <button class="btn btn-primary add-to-cart-button" onclick="addToCart(@Model.Id)">Add to Cart</button>

</div>

</div>

</div>

<div class="row">

  <div class="col-md-12">

    <div class="card product-description-card">

      <div class="card-body">

        <h5 class="card-title">Description</h5>

        <p class="card-text">@Model.Description</p>

      </div>

    </div>

  </div>

</div>

</div>

<script>

function addToCart(productId) {

  var quantity = parseInt(document.getElementById("quantity").value, 10);
```



```
// Ensure the quantity is at least 1

if (quantity < 1) {

    alert("Please enter a valid quantity.");

    return;

}


// Make the AJAX request with both productId and quantity

$.ajax({

    type: "POST",

    url: "/Products/AddToCart/" + productId,

    data: { quantity: quantity },

    success: function (result) {

        if (result.success) {

            alert(result.message);

        } else {

            alert("Failed to add product to cart.");

        }

    },

    error: function () {

        alert("An error occurred while adding the product to the cart.");

    }

});

}
```

</script>

<style>

```
.product-image-card {
```

```
border: none;

border-radius: 10px;

box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);

padding: 30px;
}
```

```
.product-details {

border: none;

padding: 20px;

border-radius: 10px;

box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);

}
```

```
.product-description-card {

border: none;

border-radius: 10px;

box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);

margin-top: 20px; /* Adjust margin as needed */

}
```

```
.form-control{

max-width: 16%;

}
```

```
.add-to-cart-button {

width: 100%;

}
```

```
</style>
```

Layout.cshtml

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<meta charset="utf-8" />
```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
<title>@ViewBag.Title - Digital Retailers Inc. E-Commerce</title>
```

```
@Styles.Render("~/Content/css")
```

```
@Scripts.Render("~/bundles/modernizr")
```

```
<style>
```

```
.background-image {
```

```
    position: fixed;
```

```
    top: 0;
```

```
    left: 0;
```

```
    width: 100%;
```

```
    height: 100%;
```

```
    /*background-image: url("~/Data/bgWallpaper.jpg");*/ /* Replace 'path_to_your_image.jpg' with your  
image URL */
```

```
/*    background-color: #F6F4EB;*/
```

```
}
```

```
.navbar {
```

```
    background-color: #4682A9;
```

```
}
```

```

</style>

</head>

<body>

<div class="background-image"></div>

<nav class="navbar navbar-expand-sm navbar-toggleable-sm navbar-dark">

    <div class="container">

        @Html.ActionLink("Digital Retailers Inc.", "Index", "Home", new { area = "" }, new { @class =
"navbar-brand" })

        <button type="button" class="navbar-toggler" data-bs-toggle="collapse" data-bs-target=".navbar-
collapse" title="Toggle navigation" aria-controls="navbarSupportedContent"

            aria-expanded="false" aria-label="Toggle navigation">

            <span class="navbar-toggler-icon"></span>

        </button>

        <div class="collapse navbar-collapse d-sm-inline-flex justify-content-between">

            <ul class="navbar-nav flex-grow-1">

                <li>@Html.ActionLink("Home", "Index", "Home", new { area = "" }, new { @class
= "nav-link" })</li>

                @*<li>@Html.ActionLink("About", "About", "Home", new { area = "" }, new {
@class = "nav-link" })</li>*@

                <li>@Html.ActionLink("Contact", "Contact", "Home", new { area = "" }, new {
@class = "nav-link" })</li>

                <li>@Html.ActionLink("Cart", "Cart", "Home", new { area = "" }, new { @class =
"nav-link" })</li>

                @*<li class="nav-item">

                    <a class="nav-link" href="@Url.Action("Cart", "Home")"><i class="fa-regular fa-cart-
shopping" style="color: #8ebfd7; font-size: 1.25rem;"></i></a>

                </li>*@

            </ul>

            @Html.Partial("_LoginPartial")

        </div>

```

```

        </div>

</nav>

<div class="container body-content">

    @RenderBody()

    <hr/>

    <footer>

        <p>&copy; @DateTime.Now.Year - My ASP.NET Application</p>

    </footer>

</div>

@Scripts.Render("~/bundles/jquery")
@Scripts.Render("~/bundles/bootstrap")
@RenderSection("scripts", required: false)

</body>
</html>

```

```

Startup.cs
using Microsoft.Owin;

using Owin;

```

```

[assembly: OwinStartupAttribute(typeof(Laptop_Ecommerce.Startup))]

namespace Laptop_Ecommerce
{
    public partial class Startup
    {

```

```

public void Configuration(IApplicationBuilder app)
{
    ConfigureAuth(app);
    ConfigureCustomServices(app);
}

private void ConfigureCustomServices(IApplicationBuilder app)
{
    // Create an instance of CartService and use it
    var cartService = new CartService();

    //app.Properties["CartService"] = cartService;
    // If you need to use cartService, you can do so here

    app.Use((context, next) =>
    {
        context.Set("CartService", cartService);
        return next.Invoke();
    });
}
}
}

```

WebConfig.cs

```
<?xml version="1.0" encoding="utf-8"?>
```

<!--

For more information on how to configure your ASP.NET application, please visit

<https://go.microsoft.com/fwlink/?LinkId=301880>

-->

<configuration>

<configSections>

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

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

</configSections>

<connectionStrings>

<add name="DefaultConnection" connectionString="Data Source=IN-LP-TR-16;Initial
Catalog=LaptopDatabase;Integrated Security=True" providerName="System.Data.SqlClient" />

</connectionStrings>

<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" />

</appSettings>

<system.web>

<authentication mode="None" />

<compilation debug="true" targetFramework="4.7.2" />

<httpRuntime targetFramework="4.7.2" />

</system.web>

<system.webServer>

<modules>

<remove name="FormsAuthentication" />

```
</modules>

</system.webServer>

<runtime>

  <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">

    <dependentAssembly>

      <assemblyIdentity name="Microsoft.Owin.Security" publicKeyToken="31bf3856ad364e35" />

      <bindingRedirect oldVersion="0.0.0.0-4.2.2.0" newVersion="4.2.2.0" />

    </dependentAssembly>

    <dependentAssembly>

      <assemblyIdentity name="Microsoft.Owin.Security.OAuth" publicKeyToken="31bf3856ad364e35" />

      <bindingRedirect oldVersion="0.0.0.0-4.2.2.0" newVersion="4.2.2.0" />

    </dependentAssembly>

    <dependentAssembly>

      <assemblyIdentity name="Microsoft.Owin.Security.Cookies" publicKeyToken="31bf3856ad364e35" />

      <bindingRedirect oldVersion="0.0.0.0-4.2.2.0" newVersion="4.2.2.0" />

    </dependentAssembly>

    <dependentAssembly>

      <assemblyIdentity name="Microsoft.Owin" publicKeyToken="31bf3856ad364e35" />

      <bindingRedirect oldVersion="0.0.0.0-4.2.2.0" newVersion="4.2.2.0" />

    </dependentAssembly>

    <dependentAssembly>

      <assemblyIdentity name="Antlr3.Runtime" publicKeyToken="eb42632606e9261f" />

      <bindingRedirect oldVersion="0.0.0.0-3.5.0.2" newVersion="3.5.0.2" />

    </dependentAssembly>

    <dependentAssembly>

      <assemblyIdentity name="System.Web.Optimization" publicKeyToken="31bf3856ad364e35" />

      <bindingRedirect oldVersion="0.0.0.0-1.1.0.0" newVersion="1.1.0.0" />

    </dependentAssembly>

  </assemblyBinding>

</runtime>

</system>

</configuration>
```



```
<dependentAssembly>

  <assemblyIdentity name="WebGrease" publicKeyToken="31bf3856ad364e35" />

  <bindingRedirect oldVersion="0.0.0.0-1.6.5135.21930" newVersion="1.6.5135.21930" />

</dependentAssembly>

<dependentAssembly>

  <assemblyIdentity name="Newtonsoft.Json" publicKeyToken="30ad4fe6b2a6aeed" />

  <bindingRedirect oldVersion="0.0.0.0-12.0.0.0" newVersion="12.0.0.0" />

</dependentAssembly>

<dependentAssembly>

  <assemblyIdentity name="Microsoft.Web.Infrastructure" publicKeyToken="31bf3856ad364e35" />

  <bindingRedirect oldVersion="0.0.0.0-2.0.1.0" newVersion="2.0.1.0" />

</dependentAssembly>

<dependentAssembly>

  <assemblyIdentity name="System.Web.Helpers" publicKeyToken="31bf3856ad364e35" />

  <bindingRedirect oldVersion="0.0.0.0-3.0.0.0" newVersion="3.0.0.0" />

</dependentAssembly>

<dependentAssembly>

  <assemblyIdentity name="System.Web.Mvc" publicKeyToken="31bf3856ad364e35" />

  <bindingRedirect oldVersion="0.0.0.0-5.2.9.0" newVersion="5.2.9.0" />

</dependentAssembly>

<dependentAssembly>

  <assemblyIdentity name="System.Web.WebPages" publicKeyToken="31bf3856ad364e35" />

  <bindingRedirect oldVersion="0.0.0.0-3.0.0.0" newVersion="3.0.0.0" />

</dependentAssembly>

</assemblyBinding>

</runtime>

<entityFramework>

  <providers>
```

```
<provider invariantName="System.Data.SqlClient" type="System.Data.Entity.SqlServer.SqlProviderServices,
EntityFramework.SqlServer" />

</providers>

</entityFramework>

<system.codedom>

  <compilers>

    <compiler language="c#;cs;cssharp" extension=".cs"
type="Microsoft.CodeDom.Providers.DotNetCompilerPlatform.CSharpCodeProvider,
Microsoft.CodeDom.Providers.DotNetCompilerPlatform, Version=2.0.1.0, Culture=neutral,
PublicKeyToken=31bf3856ad364e35" warningLevel="4" compilerOptions="/langversion:default
/nowarn:1659;1699;1701" />

    <compiler language="vb;vbs;visualbasic;vbscript" extension=".vb"
type="Microsoft.CodeDom.Providers.DotNetCompilerPlatform.VBCodeProvider,
Microsoft.CodeDom.Providers.DotNetCompilerPlatform, Version=2.0.1.0, Culture=neutral,
PublicKeyToken=31bf3856ad364e35" warningLevel="4" compilerOptions="/langversion:default /nowarn:41008
/define:_MYTYPE=\&quot;Web\&quot;; /optionInfer+" />

  </compilers>

</system.codedom>

</configuration>
```