```
using Assignment3.DB;
using Assignment3.Models;
using System.Collections.Generic;
using System.Linq;
using System.Web.Mvc;
namespace Assignment3.Controllers
     public class HomeController : Controller
{
           private AppDbContext ctx;
           public HomeController()
{
                 ctx = new AppDbContext();
           public ActionResult Index()
{
                 if (Session["Id"] == null)
                       return RedirectToAction("Login"); // Redirect to the login page if the user is not logged in
                 var model = ctx.Products.ToList();
int userId = (int)Session["Id"];
string username = (string)Session["Username"];
                 return View(model);
           [HttpGet]
public ActionResult Login()
{
                 return View():
           public ActionResult Login(string username, string password)
{
                 \label{eq:var_user} \textit{var} \; \textit{user} \; = \; \textit{ctx.Users.FirstOrDefault(u => u.Username == username \&\& u.Password == password);}
                       // Set session variables
Session["Id"] = user.Id;
Session["Username"] = user.Username;
                       return RedirectToAction("Index"); // Redirect to the home page after successful login
                 ViewBag.ErrorMessage = "Invalid username or password";
return View();
           public ActionResult Logout()
{
                 Session.Abandon(); // Delete the session
                 {\tt return} \ \ {\tt RedirectToAction("Login");} \ \ // \ \ {\tt Redirect} \ \ {\tt to} \ \ {\tt the} \ \ {\tt login} \ \ {\tt page} \ \ {\tt after} \ \ {\tt logout}
           //
// GET: /Home/Details/5
public ActionResult Details(int id)
{
                 return View();
           //
// GET: /Home/Create
public ActionResult Create()
{
                 return View();
           //
// POST: /Home/Create
[HttpPost]
public ActionResult Create(Products0025 cnt)
{
                 try
{
                       ctx.Products.Add(cnt);
ctx.SaveChanges();
return RedirectToAction("Index");
                 catch
                       return View();
           }
           //
// GET: /Home/Edit/5
public ActionResult Edit(int id)
{
                 return View();
            //
// POST: /Home/Edit/5
           [HttpPost]
public ActionResult Edit(int id, Products0025 cnt)
{
                 try
{
```

```
// TODO: Add update logic here
          // iooc. Now update togic index
ctx.Entry(cnt).State = System.Data.Entity.EntityState.Modified;
ctx.SaveChanges();
return RedirectToAction("Index");
     catch
{
          return View();
}
//
// GET: /Home/Delete/5
public ActionResult Delete(int id)
{
     var keyid = ctx.Products.Find(id);
return View(keyid);
// POST: /Home/Delete/5
[HttpPost]
LHTTPPOST]
[ACTIONName("Delete")]
public ActionResult DeleteConfirmed(int id)
{
     var product = ctx.Products.Find(id);
          ctx.Products.Remove(product);
ctx.SaveChanges();
          return RedirectToAction("Index");
     catch
          return View():
public ActionResult AddToCart(int id)
{
     var product = ctx.Products.Find(id);
     if (product != null)
          var cart = GetCart();
var cartItem = cart.FirstOrDefault(item => item.ProductId == id);
          if (cartItem != null)
                // Increment the quantity if the product already exists in the cart cartItem.Quantity++;
          élse
{
               // Add the product to the cart with a quantity of 1 cart.Add(new CartItem \{
                    ProductId = product.Id,
ProductName = product.Name,
Price = product.Price,
Quantity = 1
               });
          SaveCart(cart);
     return RedirectToAction("Index");
}
public ActionResult RemoveFromCart(int id)
{
     var cart = GetCart();
     var cartItem = cart.FirstOrDefault(item => item.ProductId == id);
     if (cartItem != null)
{
           cart.Remove(cartItem);
          SaveCart(cart);
     return RedirectToAction("Cart");
public ActionResult Cart()
{
     var cart = GetCart();
return View(cart);
private List<CartItem> GetCart()
{
     var cart = Session["Cart"] as List<CartItem>;
     if (cart == null)
          cart = new List<CartItem>();
Session["Cart"] = cart;
     return cart;
private void SaveCart(List<CartItem> cart)
{
    Session["Cart"] = cart;
```

}

```
Index.cshtml View
@model IEnumerable<Assignment3.Models.Products0025>
@{
   ViewBag.Title = "Index";
bool isLoggedIn = (Session["Id"] != null);
<!DOCTYPE html>
<style>
table {
           width: 100%;
max-width: 100%;
       }
           font-weight: bold;
       }
       td, th {
   padding: 8px;
   text-align: left;
   border-bottom: 1px solid #ddd;
       3
        .btn-group {
   white-space: nowrap;
   </style>
</head>
<body>
```

```
@if (isLoggedIn)
 <h1 style="text-align: center">Index</h1>
>
```

<button onclick="location.href='@Url.Action("Create")'" class="btn btn-primary">Create New</button> <thead>

<button onclick="location.href='@Url.Action("Cart")'" class="btn btn-primary">MY CART</button>

```
@Html.DisplayNameFor(model => model.Id)

othol.DisplayNameFor(model => model.Code)

othol.DisplayNameFor(model => model.Name)

othol.DisplayNameFor(model => model.Price)

othol.DisplayNameFor(model => model.Price)

othol.DisplayNameFor(model => model.Dimension)

othol.DisplayNameFor(model => model.Dimension)

othol.DisplayNameFor(model => model.Brand)

othol.DisplayNameFor(model => model.Brand)

    @foreach (var item in Model)
    {
```

@Html.DisplavNameFor(model => model.Id)

<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js" integrity="sha384-pzjw8b+UeSp1wqTN8TlXW9Fq8C9us21st09SQiqyTGvRtS9l7+a+jrDI+Q7bq5T9" crossorigin="anonymous"></script> </body> </html>

CartItem.cs Model

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
```

```
public class CartItem
           public int ProductId { get; set; }
public string ProductName { get; set; }
public int Price { get; set; }
public int Quantity { get; set; }
                                                                                               Products0025 cs Model
using System;
using System.Collections.Generic;
using System.ComponentModel.DataAnnotations;
using System.Linq;
using System.Web;
namespace Assignment3.Models {
      public class Products0025
     {
          [Key]
public int Id { get; set; }
public int Code { get; set; }
public string Name { get; set; }
public int Price { get; set; }
public string Color { get; set; }
public string Dimension { get; set; }
public string Dimension { get; set; }
public string Brand { get; set; }
                                                                                                 Users0025.cs Model
using System;
using System.Collections.Generic;
using System.ComponentModel.DataAnnotations;
using System.Ling;
using System.Web;
namespace Assignment3.Models
     public class Users0025
           public int Id { get; set; }
public string Username { get; set; }
public string Password { get; set; }
}
                                                                                                    Cart.cshtml
@model List<Assignment3.Models.CartItem>
  Price
          Price

          @foreach (var item in Model)
{
                      <button onclick="location.href='@Url.Action("RemoveFromCart", new { id = item.ProductId }))'" class="btn btn-primary">Remove</button>
                     }
```

Login.cshtml

```
@using (Html.BeginForm())
                                            </div>
                                            <input type="submit" value="Login" class="btn btn-primary" />
                                                                                                                                                                                                 DB AppDbContext.cs
using System;
using System.Collections.Generic;
using System.Data.Entity;
using System.Linq;
using System.Web;
using System.Data.SqlClient;
using Assignment3.Models;
 namespace Assignment3.DB
           public class AppDbContext : DbContext
{
                       public AppDbContext() : base("name=conn")
{
                      public DbSet<Products0025> Products { get; set; }
public DbSet<Users0025> Users { get; set; }
                                                                                                                                                                                     Migrations Configuration.cs
namespace Assignment3.Migrations {
           using System;
using System.Data.Entity;
using System.Data.Entity.Migrations;
using System.Linq;
           internal sealed class Configuration : DbMigrationsConfiguration<Assignment3.DB.AppDbContext>
                     public Configuration()
{
                                AutomaticMigrationsEnabled = false;
                       \begin{array}{lll} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & 
                                 // This method will be called after migrating to the latest version.
                                // You can use the DbSet<T>.AddOrUpdate() helper extension method
// to avoid creating duplicate seed data.
         }
                                                                                                                                                              Migrations 202306181610160 InitialCreate2.cs
namespace Assignment3.Migrations {
           using System;
using System.Data.Entity.Migrations;
           public partial class InitialCreate2 : DbMigration
{
                      public override void Up()
{
                                RenameTable(name: "dbo.Products", newName: "Products0025");
                                 CreateTable(
"dbo.Users0025",
                                           c => new
{
                                                                 Id = c.Int(nullable: false, identity: true),
Username = c.String(),
Password = c.String(),
                                                      3)
                                            .PrimaryKey(t => t.Id);
                     }
                       public override void Down()
{
                                DropTable("dbo.Users0025");
RenameTable(name: "dbo.Products0025", newName: "Products");
       }
```

```
using System;
using System.Collections.Generic;
using System.IO;
using System.Linq;
using System.Web;
using System.Web.Mvc;
namespace WebApplication26.Controllers
     public class WebController : Controller
{
          //
// GET: /Web/
          public ActionResult Index()
{
               return View();
          public ActionResult UploadTextFile(HttpPostedFileBase file) {
          [HttpPost]
               if (file != null && file.ContentLength > 0)
                    string fileContent = "";
using (var reader = new StreamReader(file.InputStream))
{
                        fileContent = reader.ReadToEnd();
                    string updatedData = fileContent.ToUpper();
string newFileName = "M_TextFile.txt";
string path = Server.MapPath("~/UploadedFiles/") + newFileName;
                    System.IO.File.WriteAllText(path, updatedData);
ViewBag.Content = updatedData;
               }
else
                    // Handle file upload error
               return View("Index");
          }
          [HttpPost]
public ActionResult UploadCSVFile(HttpPostedFileBase file)
{
               if (file != null && file.ContentLength > 0)
                    var csvData = new List<string[]>();
using (var reader = new StreamReader(file.InputStream))
                          while (!reader.EndOfStream)
                              string line = reader.ReadLine();
string[] row = line.Split(',');
                              csvData.Add(row);
                         }
                    }
                    ViewBag.Content = csvData;
               élse
{
                    // Handle file upload error
               return View("Index");
          [HttpPost]
public ActionResult DeleteFile(string fileName)
{
               if (!string.IsNullOrEmpty(fileName))
{
                    string path = Server.MapPath("~/UploadedFiles/") + fileName;
                    if (System.IO.File.Exists(path))
{
                         System.IO.File.Delete(path);
ViewBag.Message = "File deleted successfully.";
                    élse
{
                          ViewBag.Message = "File not found.";
               }
else
{
                   // Handle missing fileName parameter
               return View("Index");
          }
          [HttpPost]
           public ActionResult UpdateFile(HttpPostedFileBase file)
{
               if (file != null && file.ContentLength > 0)
```

```
string fileContent = "";
using (var reader = new StreamReader(file.InputStream))
{
                       fileContent = reader.ReadToEnd();
                  string updatedData = fileContent.ToUpper();
string newFileName = "M_TextFile.txt";
string path = Server.MapPath("~/UploadedFiles/") + newFileName;
                   if (System.IO.File.Exists(path))
                       System.IO.File.WriteAllText(path, updatedData);
ViewBag.Content = updatedData;
                  else
{
                       // File does not exist, handle accordingly
                  }
              }
else
                  // Handle file upload error
             return View("Index");
        }
   }
                                                                                   File Upload Model
using System.ComponentModel.DataAnnotations;
using System.Web;
namespace WebApplication1.Models
     public class FileUploadModel
     {
         [Required(ErrorMessage = "Please select a file.")]
         [Display(Name = "File")]
         public HttpPostedFileBase File { get; set; }
    }
}
                                                                                   File Upload Index
    ViewBag.Title = "File Operations";
<h2>Upload Text File</h2>
<h2>Upload CSV File</h2>
@using (Html.BeginForm("UploadCSVFile", "Web", FormMethod.Post, new { enctype = "multipart/form-data" }))
    <input type="file" name="file" />
<input type="submit" value="Upload" />
<h2>Delete File</h2>
@using (Html.BeginForm("DeleteFile", "Web", FormMethod.Post))
{
    <input type="text" name="fileName" placeholder="File name" />
<input type="submit" value="Delete" />
<h2>Update File</h2>
@using (Html.BeginForm("UpdateFile", "Web", FormMethod.Post, new { enctype = "multipart/form-data" })) {
    <input type="file" name="file" />
<input type="submit" value="Update" />
@if (!string.IsNullOrEmpty(ViewBag.Message))
{
     @ViewBag.Message
```

Session

Session Less Controller

If some of the controllers of your Asp. Net MVC application are not using session state features, you can disable session for those controllers and can gain slight performance improvement of your application. You can simplify session state for your application by using available options for session state.

In Asp.Net MVC, SessionState attribute provides you more control over the behavior of session-state by specifying the value of SessionStateBehavior enumeration as shown below:

Value	Description
Default	The default Asp.Net behavior is used to determine the session state behavior.
Disabled	Session state is disabled entirely.
ReadOnly	Read-only session state behavior is enabled.
Required	Full read-write session state behavior is enabled.

```
[SessionState(SessionStateBehavior.Disabled)]
public class HomeController : Contr a Default of public ActionResult Index()

[ public ActionResult Index() a ReadOnly
```

When a user visits a website, a unique session is created for that user. The session is identified by a session ID, which is typically stored in a cookie or appended to the URL. The session ID is used to associate subsequent requests from the same user with their specific session data

```
Sesion create
public class HomeController : Controller
     public ActionResult Index()
{
           // Storing a value in session
Session["Username"] = "JohnDoe";
           // Retrieving a value from session
string username = (string)Session["Username"];
           // Checking if a session variable exists
if (Session["Username"] != null)
                // Session variable exists
           }
else
                 // Session variable does not exist
           return View();
    }
}
0r
public ActionResult Index()
{
     // Storing a value in session
Session["Username"] = "JohnDoe";
     // Retrieving a value from session
string username = (string)Session["Username"];
     return View();
```

//List

```
public ActionResult MyAction()
{
      // Create a new list
List<string> myList = new List<string>();
      // Add items to the list
myList.Add("Item 1");
myList.Add("Item 2");
myList.Add("Item 3");
      // Store the list in the session
Session["MyList"] = myList;
      return View();
public ActionResult AnotherAction()
      // Retrieve the list from the session
List<string> myList = Session["MyList"] as List<string>;
    //List<string> myList = (List<string>)Session["MyList"];
      // Do something with the list
```

```
if (myList != null)
{
                  // Access the items in the list
foreach (string item in myList)
                        // Process each item // ...
            return View();
                                                                                                                           //Update
      // Retrieve the existing value from the session
string oldValue = (string)Session["MyVariable"];
      // Update the value
string newValue = "New Value";
Session["MyVariable"] = newValue;
                                                                                                                            //Delete
      public ActionResult Logout()
            // Abandon the session
Session.Abandon();
            // Perform any additional logout logic
           return RedirectToAction("Index", "Home");
      if (Session != null)
            // Session is available
// Perform session-related operations
      élse
            // Session is not available
// Handle the absence of session
                                                                                                                     // Is Session Exists
      if (Session["MyVariable"] != null)
           // Session variable is not null
            // Check if the session variable has a specific value
if ((string)Session["MyVariable"] == "desiredValue")
                 // Session variable has the desired value
// Perform actions accordingly
            }
else
                  \ensuremath{//} Session variable exists but has a different value \ensuremath{//} Perform other actions
      }
else
{
            // Session variable is null or doesn't exist
// Handle the absence of session variable
                                                                                                                    DOM / ¡Query events
let table = new DataTable('#example');
table.on('click', 'tbody tr', function () {
  let data = table.row(this).data();
  alert('You clicked on ' + data[0] + "'s row");
});
                                                                                                                      DataTables events
function eventFired(type) {
  let n = document.querySelector('#demo_info');
    '<div>' + type + ' event - ' + new Date().getTime() + '</div>';
```

```
new DataTable('#example')
 .on('order.dt', () => eventFired('Order'))
 .on('search.dt', () => eventFired('Search'))
 .on('page.dt', () => eventFired('Page'));
                                                                                                      Column rendering
new DataTable('#example', {
  columnDefs: [
      // The `data` parameter refers to the data for the cell (defined by the
      // `data` option, which defaults to the column being worked with, in
      // this case `data: 0`.
      render: (data, type, row) => data + ' (' + row[3] + ')',
      targets: 0
   { visible: false, targets: [3] }
 ]
});
                                                                                                      Enter Key to Search
new DataTable('#example', {
 search: {
   return: true
});
                                                                                                      Page length options
new DataTable('#example', {
 lengthMenu: [
   [10, 25, 50, -1],
   [10, 25, 50, 'AII']
                                                                                                Multiple table control elements
new DataTable('#example', {
  dom: '<"top"iflp<"clear">>rt<"bottom"iflp<"clear">>
Complex headers with column visibility
new DataTable('#example', {
  columnDefs: [
     targets: -1,
      visible: false
```

n.scrollTop = n.scrollHeight;

```
]
                                                                                                    Read HTML to data objects
new DataTable('#example', {
  columns: [
    { data: 'name' },
    { data: 'position' },
    { data: 'office' },
    { data: 'age' },
    { data: 'start_date' },
    { data: 'salary' }
});
                                                                           HTML5 data-* attributes - cell data/HTML5 data-* attributes - table options
new DataTable('#example');
                                                                                                         Setting defaults
Object.assign(DataTable.defaults, {
 searching: false,
  ordering: false
});
new DataTable('#example');
Row created callback
new DataTable('#example', {
  createdRow: (row, data, index) => {
    if (data[5].replace(/[\$,]/g, '') * 1 > 150000) {
      row. query Selector (':nth-child (6)'). class List. add ('high light'); \\
  }
});
                                                                                                     Custom toolbar elements
new DataTable('#example', {
  dom: '<"toolbar">frtip'
});
document.query Selector ('div.toolbar').inner HTML = '<b>Custom tool bar! Text/images etc.</b>'; \\
                                                                                                Order direction sequence control
new DataTable('#example', {
  columns: [
    null,
    null,
    { orderSequence: ['asc'] },
    { orderSequence: ['desc', 'asc', 'asc'] },
    { orderSequence: ['desc'] },
    null
```

});

```
@model IEnumerable<MyEcommerceAdmin.Models.Order>
            ViewBag.Title = "Order";
Layout = "~/Views/Shared/_Layout.cshtml";
  <link rel="stylesheet" href="https://cdn.datatables.net/1.13.5/css/jquery.dataTables.min.css" />
  <div class="row">
             Order ID
                                                          Payment ID
Shipping ID
Shipping ID
Shipping ID
<t
                                   -com.orderDater>

**Ttd>

**Com.orderID are { @class = "btn btn-info" })

**Com.orderID are { @cl
/
//tbody>
//table>
//div>
          Others
                                                                                                                                                                                                                    Connection
 <connectionStrings>
    <add name="conn" connectionString="Data Source=AdvWebClass.mssql.somee.com;Initial Catalog=AdvWebClass;User
ID=hammadali562002_SQLLogin_1;Password=7ittcy6x85" providerName="System.Data.SqlClient" />
                 </connectionStrings>
                                                                                                                                                                                                                 Session Time
             <system.web>
                   <!-- Other configuration settings -->
                   <sessionState mode="InProc" timeout="20" />
             </system.web>
            Enable-Migrations
Add-Migration InitialCreate
Update-Database
            INSERT INTO table_name (column1, column2, ...)
VALUES (value1, value2, ...);
            DELETE FROM table_name
            WHERE condition:
            UPDATE table_name
SET column1 = value1, column2 = value2, ...
WHERE condition;
            DROP TABLE table_name;
             SELECT column1, column2, ...
             FROM table name
            WHERE condition;
                 Data 1
```