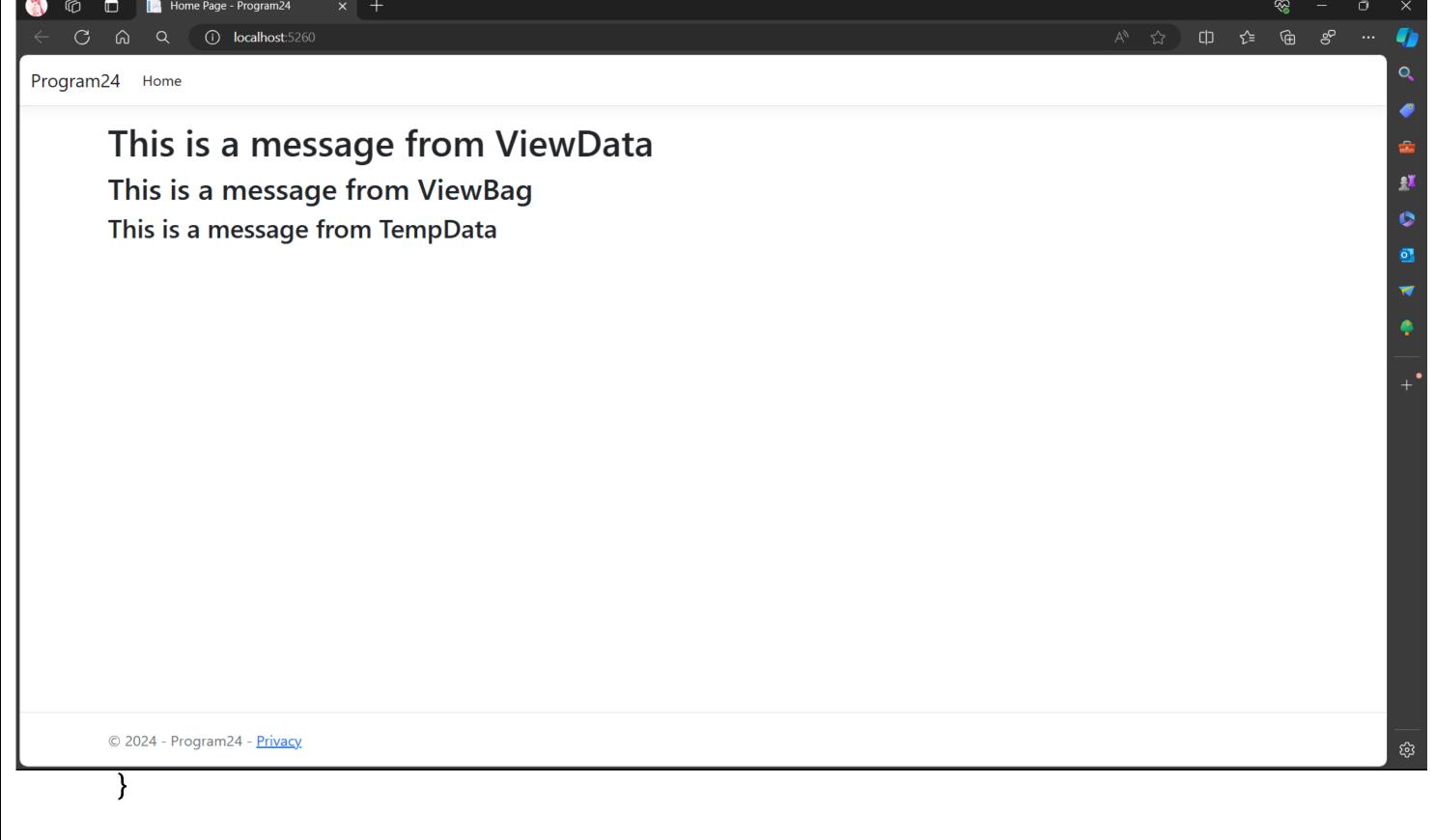
16. Develop ASP.NET Core MVC web application to demonstrate the use of ViewData, Viewbag and TempData.

```
Ans - index.cshtml
       @{
              ViewData["Title"] = "Home Page";
              <h1>@ViewData["Sandesh"]</h1>
              <h2>@ViewBag.Message</h2>
              <h3>@TempData["Message"]</h3>
       HomeController.cs
       using Microsoft.AspNetCore.Mvc;
using Program24. Models;
using System. Diagnostics;
namespace Program24.Controllers
  public class HomeController: Controller
    private readonly ILogger<HomeController> _logger;
    public HomeController(ILogger<HomeController> logger)
      _logger = logger;
    public IActionResult Index()
```

```
ViewData["Sandesh"] = "This is a message from ViewData";
ViewBag.Message = "This is a message from ViewBag";
TempData["Message"] = "This is a message from TempData";

return View();
}

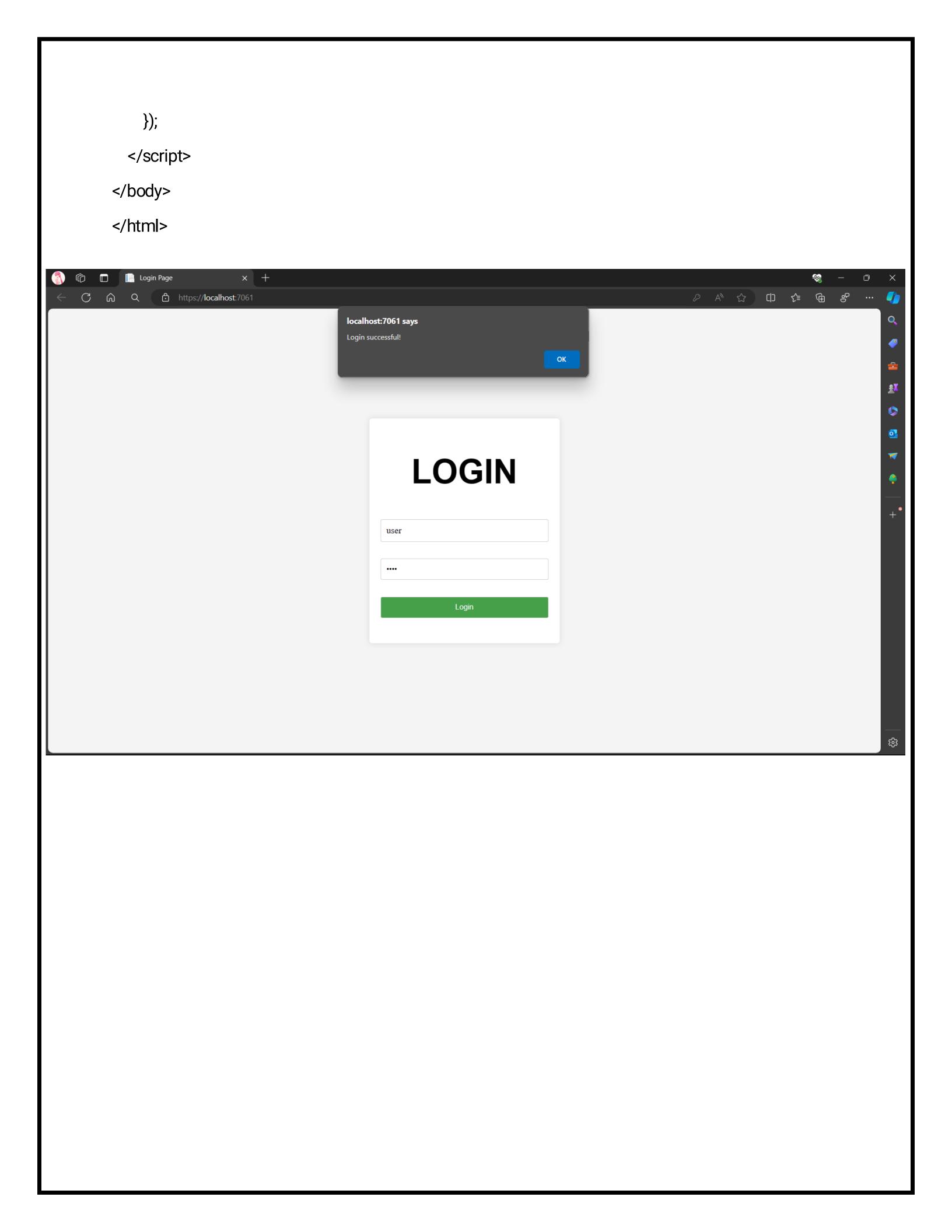
[ResponseCache(Duration = 0, Location = ResponseCacheLocation.None, NoStore = true)]
public IActionResult Error()
{
    return View(new ErrorViewModel { RequestId = Activity.Current?.Id ??
HttpContext.TraceIdentifier});
}
}
```



```
17. Develop ASP.NET Core MVC web application to Create a Layout View in ASP.NET Core MVC.
   Ans - index.cshtml
       @{
  ViewBag.Title = "Home Page";
  Layout = "~/Views/Shared/_Layout1.cshtml";
<center><h1 style="font-size: 60px;">LOGIN</h1></center>
Layout.cshtml
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Login Page</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #f4f4f4;
      margin: 0;
      padding: 0;
      display: flex;
      justify-content: center;
      align-items: center,
      height: 100vh;
    .container {
      width: 300px;
      background-color: #fff;
```

```
border-radius: 5px;
  padding: 20px;
  box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
h2 {
  text-align: center;
input[type="text"],
input[type="password"],
input[type="submit"] {
  width: 100%;
  padding: 10px;
  margin-top: 10px;
  margin-bottom: 20px;
  border: 1px solid #ccc;
  border-radius: 3px;
  box-sizing: border-box;
input[type="submit"] {
  background-color: #4caf50;
  color: white;
  cursor: pointer;
  input[type="submit"]:hover {
    background-color: #45a049;
.error-message {
  color: red;
  font-size: 14px;
```

```
margin-top: 5px;
  </style>
</head>
<body>
  <div class="container">
    @RenderBody()
    <form id="loginForm">
      <input type="text" id="username" placeholder="Username">
      <input type="password" id="password" placeholder="Password">
      <input type="submit" value="Login">
      <div class="error-message" id="errorMessage"></div>
    </form>
  </div>
  <script>
    document.getElementById("loginForm").addEventListener("submit", function(event) {
      event.preventDefault();
      var username = document.getElementById("username").value;
      var password = document.getElementById("password").value;
      if (username === "" || password === "") {
        document.getElementById("errorMessage").innerText = "Please enter both username and
password.";
        return;
      if (username === "user" && password === "password") {
        alert("Login successful!");
      } else {
        document.getElementById("errorMessage").innerText = "Invalid username or password.";
```



18. Develop ASP.NET Core MVC web application to demonstrate the use of Razor Syntax (If ...else, Switch, For Loop, For each Loop, While Loop)

```
Ans - index.cshtml
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>@ViewData["Title"]="Program 26"</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 0;
      padding: 0;
      color: #333;
      background-color: #f9f9f9;
    section {
      padding: 25px 0;
      text-align: center;
      background-color: #fff;
      border-bottom: 1px solid #ddd;
    h1 {
      font-size: 25px;
      margin: 0;
    ul {
```

```
list-style: none;
      padding: 0;
    li {
      margin-bottom: 5px;
    p {
      margin: 0;
    . special-day {
      color: #e74c3c;
      font-weight: bold;
  </style>
</head>
<body>
  <section style="margin-top: 10px;">
    <div class="container">
      <center><h1>IF...ELSE</h1></center>
      <h1>----</h1>
      @{
        int num1 = 10, num2 = 3;
        String num3;
        if (num1 % num2 == 0)
          num3 = "The number is Even!";
        else
```

```
num3 = "The number is Odd!";
   <h1>The difference between <b>@num1</b> and <b>@num2</b> is <b>@num3</b></h1>
 </div>
</section>
<section>
 <div class="container">
   <center><h1>FOR LOOP</h1></center>
   <h1>----</h1>
   </
     @for (int i = 0; i \le 2; i++)
       <h1>@i</h1>
   </div>
</section>
<section>
 <div class="container">
   <center><h1>WHILE LOOP</h1></center>
   <h1>----</h1>
   @{
       varn = 0;
       while (n < 2)
         n += 1;
         <h1>Line @n</h1>
```

```
</div>
</section>
<section>
 <div class="container">
   <center><h1>FOREACH</h1></center>
   <h1>----</h1>
   @{
     string[] members = { "Apple", "Banana", "Grapes"};
     foreach (var person in members)
       <h1>@person</h1>
 </div>
</section>
<section>
 <div class="container">
   <center><h1>SWITCH CASE</h1></center>
   <h1>----</h1>
   @switch (DateTime.Now.DayOfWeek)
     case DayOfWeek.Monday:
       <span class="special-day">Uh-oh...
       break;
     case DayOfWeek.Friday:
       <span class="special-day">Weekend coming up!</span>
```

</html>

19. Create ASP.NET Core MVC registration page using Razor Syntax and Html Helper methods to register new student.

First name (Textbox)

Last name or initial (Textbox)

Gender (Radio Button)

Age (Take numeric input only)

Existing Qualification (Dropdown List)

Email address (Regular Expression)

Choose a password (min. 8 characters)

Ans - HomeController.cs

using Microsoft.AspNetCore.Mvc;

using Register. Models;

using System. Diagnostics;

namespace Register. Controllers

{

#### IF...ELSE

The difference between 10 and 3 is The number is Odd!

### FOR LOOP

0

1

2

### WHILE LOOP

Line 1

Line 2

### **FOREACH**

Apple

Banana

Grapes

### **SWITCH CASE**

Nothing special about this day...

```
public class HomeController: Controller
    private readonly ILogger<HomeController> _logger;
    public HomeController(ILogger<HomeController> logger)
      _logger = logger;
    [HttpGet]
    public IActionResult Index()
      return View();
    [HttpPost]
    public IActionResult Index(Registration registration)
      return View("Congratulation", registration);
    public IActionResult Privacy()
      return View();
    [ResponseCache(Duration = 0, Location = ResponseCacheLocation.None, NoStore = true)]
    public IActionResult Error()
      return View(new ErrorViewModel { RequestId = Activity.Current?.Id ??
HttpContext.TraceIdentifier });
    }}}
Index.cshtml
```

```
@model Register.Models.Registration
@{
  Layout = null;
<!DOCTYPE html>
<html>
<head>
  <title>RsvpForm</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #f5f5f5;
      margin: 0;
      padding: 0;
      box-sizing: border-box;
    .container {
      width: 90%; /* Relative width */
      max-width: 600px;
      margin: 4% auto;
      padding: 20px;
      background-color: #fff;
      border-radius: 8px;
      box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
    input[type="text"],
    input[type="email"],
    input[type="password"],
    select,
```

```
input[type="number"] {
    width: calc(100% - 22px); /* Adjusted width */
    padding: 10px;
    margin-bottom: 10px;
    border: 1px solid #ccc;
    border-radius: 5px;
    box-sizing: border-box;
    font-size: 16px;
  input[type="submit"] {
    width: 100%; /* Relative width */
    padding: 10px;
    border: none;
    border-radius: 5px;
    background-color: #4CAF50;
    color: #fff;
    font-size: 16px;
    cursor: pointer;
    input[type="submit"]:hover {
      background-color: #45a049;
  p {
    margin-bottom: 10px;
</style>
<script>
  function validateForm() {
    var firstName = document.getElementById("FirstName").value;
```

```
var lastName = document.getElementById("LastName").value;
var gender = document.querySelector('input[name="Gender"]:checked');
var age = document.getElementById("Age").value;
var qualification = document.getElementById("Qualification").value;
var email = document.getElementById("Email").value;
var password = document.getElementById("Password").value;
if (firstName.trim() == "") {
  alert("Enter your first name");
  return false;
if (lastName.trim() == "") {
  alert("Enter your last name");
  return false;
if (!gender) {
  alert("Select your gender");
  return false;
if (age.trim() == "") {
  alert("Enter your age");
  return false;
if (qualification.trim() == "") {
  alert("Enter your qualification");
  return false;
if (email.trim() == "") {
  alert("Enter your email");
  return false;
```

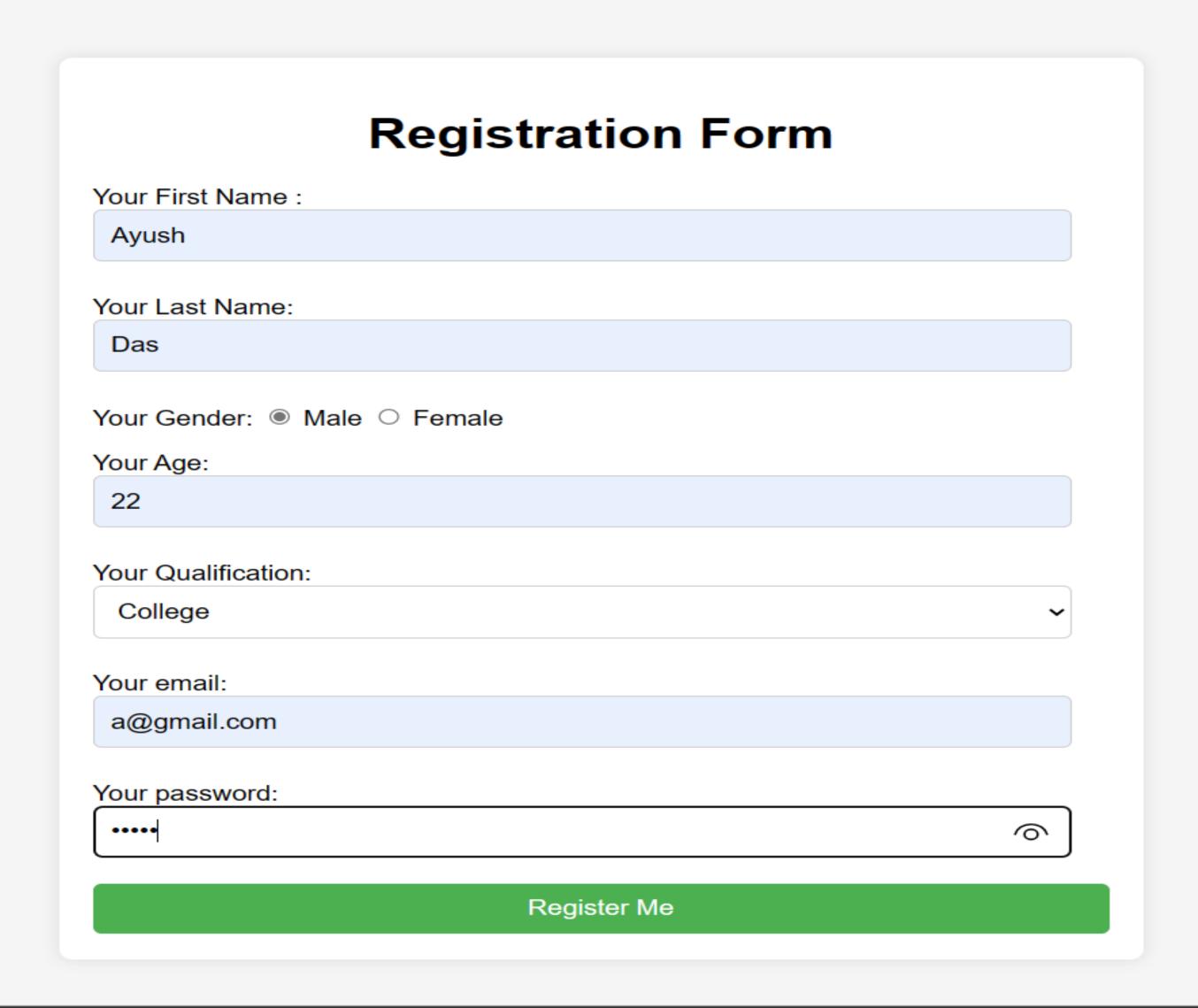
```
if (password.trim() == "") {
        alert("Enter your password");
        return false;
      return true;
  </script>
</head>
<body>
  <div class="container">
    <center><h1>Registration Form</h1></center>
    @using (Html.BeginForm("Index", "Home", FormMethod.Post, new { onsubmit = "return
validateForm();" }))
      >
        Your First Name: @Html.TextBoxFor(x => x.FirstName, new { id = "FirstName" })
      >
        Your Last Name: @Html.TextBoxFor(x => x.LastName, new { id = "LastName" })
      >
        Your Gender:
        @Html.RadioButtonFor(x => x.Gender, "Male", new { id = "GenderMale" }) Male
        @Html.RadioButtonFor(x => x.Gender, "Female", new { id = "GenderFemale" }) Female
      >
        Your Age: @Html.TextBoxFor(x => x.Age, new { id = "Age", type = "number", min = "11", max =
"24" })
```

```
>
        Your Qualification: @Html.DropDownListFor(x => x.Qualification, new SelectList(new
List<string> { "High School", "College", "Bachelor's Degree", "Master's Degree", "PhD" }), "Select", new { id
= "Qualification" })
      >
        Your email: @Html.TextBoxFor(x => x.Email, new { id = "Email", type = "email" })
      >
        Your password: @Html.PasswordFor(x => x.Password, new { id = "Password", minlength = "3",
maxlength = "8" })
      <input type="submit" value="Register Me" />
  </div>
</body>
</html>
Registration.cs
using System.ComponentModel.DataAnnotations;
namespace Register. Models
  public class Registration
    public string FirstName { get; set; }
    public string LastName { get; set; }
    public string Gender { get; set; }
    public int Age { get; set; }
    public string Qualification { get; set; }
    public string Email { get; set; }
```

```
public string Password { get; set; }
  }}
Congradulation.cshtml
@model Register.Models.Registration
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Congratulations</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 0;
      padding: 0;
      background-color: #f4f4f4;
    .container {
      max-width: 600px;
      margin: 20px auto;
      padding: 20px;
      background-color: #fff;
      border-radius: 8px;
      box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);
    h1, h2 {
      text-align: center;
```

```
h1 {
     color: #333;
   h2 {
     color: #666;
   .details {
     margin-top: 20px;
     .details p {
       margin: 10px 0;
 </style>
</head>
<body>
 <div class="container">
   <h1>Congratulations, @Model.FirstName!</h1>
   <h2>Your Registration has been Successfully completed.</h2>
   <div class="details">
     <strong>Your full name:</strong> @Model.FirstName @Model.LastName
     <strong>Your age:</strong> @Model.Age
     <strong>Your qualification:</strong> @Model.Qualification
     <strong>Your email:</strong> @Model.Email
     <strong>Your password:</strong> @Model.Password
   </div>
 </div>
</body>
```

</html>



# Congratulations, Ayush!

Your Registration has been Successfully completed.

Your full name: Ayush Das

Your age: 22

Your qualification: College

Your email: a@gmail.com

Your password: 12345

20. Develop ASP.NET core MVC web application to perform CRUD operation by using entity framework with validation on Book model.

Book (Bookld, BookTitle, AuthorName, Publication and Price)

Ans - Book.cs

using System.ComponentModel.DataAnnotations;

```
namespace Program28. Models
  public class Book
    [Key]
    public int BookId { get; set; }
    [Required(ErrorMessage = "Title is required")]
    public string BookTitle { get; set; }
    [Required(ErrorMessage = "Author name is required")]
    public string AuthorName { get; set; }
    [Required(ErrorMessage = "Publication is required")]
    public string Publication { get; set; }
    [Required(ErrorMessage = "Price is required")]
    [Range(0, double.MaxValue, ErrorMessage = "Price must be a positive number")]
    public decimal Price { get; set; }
  }}
Program28Context.cs
using System;
using System.Collections.Generic;
using System.Linq;
using System. Threading. Tasks;
using Microsoft.EntityFrameworkCore;
using Program28. Models;
namespace Program28.Data
  public class Program28Context : DbContext
    public Program28Context (DbContextOptions<Program28Context> options)
      : base(options)
```

```
public DbSet<Program28.Models.Book> Book { get; set; } = default!;
  }}
InitialMigration.cs
using Microsoft.EntityFrameworkCore.Migrations;
namespace Program28. Migrations
  public partial class Initial Migration : Migration
    protected override void Up(MigrationBuilder migrationBuilder)
      migrationBuilder.CreateTable(
        name: "Book",
        columns: table => new
           BookId = table.Column<int>(type: "int", nullable: false)
             .Annotation("SqlServer:Identity", "1, 1"),
           BookTitle = table.Column<string>(type: "nvarchar(max)", nullable: false),
           AuthorName = table.Column<string>(type: "nvarchar(max)", nullable: false),
           Publication = table.Column<string>(type: "nvarchar(max)", nullable: false),
           Price = table.Column<decimal>(type: "decimal(18,2)", nullable: false)
        },
        constraints: table =>
          table.PrimaryKey("PK_Book", x => x.BookId);
        });
    protected override void Down(MigrationBuilder migrationBuilder)
```

```
migrationBuilder.DropTable(
        name: "Book");
    }}}
BookController.cs
    public IActionResult Create()
      return View();
    [HttpPost]
    [ValidateAntiForgeryToken]
    public async Task<IActionResult> Create([Bind("Bookld,BookTitle,AuthorName,Publication,Price")]
Book book)
      if (ModelState.IsValid)
        _context.Add(book);
        await _context.SaveChangesAsync();
        return RedirectToAction(nameof(Index));
      return View(book);
    public async Task<IActionResult> Edit(int? id)
      if (id == null)
        return NotFound();
      var book = await _context.Book.FindAsync(id);
```

```
if (book == null)
        return NotFound();
      return View(book);
    [HttpPost]
    [ValidateAntiForgeryToken]
    public async Task<IActionResult> Edit(int id,
[Bind("BookId,BookTitle,AuthorName,Publication,Price")] Book book)
      if (id != book.BookId)
        return NotFound();
      if (ModelState.IsValid)
        try
          _context.Update(book);
          await _context.SaveChangesAsync();
        catch (DbUpdateConcurrencyException)
          if (!BookExists(book.BookId))
            return NotFound();
          else
```

```
throw;
    return RedirectToAction(nameof(Index));
  return View(book);
public async Task<IActionResult> Delete(int? id)
 if (id == null)
    return NotFound();
  var book = await _context.Book
    .FirstOrDefaultAsync(m => m.BookId == id);
  if (book == null)
    return NotFound();
  return View(book);
[HttpPost, ActionName("Delete")]
[ValidateAntiForgeryToken]
public async Task<IActionResult> DeleteConfirmed(int id)
  var book = await _context.Book.FindAsync(id);
  if (book != null)
```

```
_context.Book.Remove(book);
}

await _context.SaveChangesAsync();
return RedirectToAction(nameof(Index));
}

private bool BookExists(int id)
{
    return _context.Book.Any(e => e.BookId == id);
```

Program28 Home Privacy

# **Delete**

## Are you sure you want to delete this?

### Book

BookTitle Web Programming

AuthorNameSanjay SirPublication02/01/2010

**Price** 189.00

Delete | Back to List

**}**}}

Program28 Home Privacy

### Index

#### Create New

BookTitle	AuthorName	Publication	Price	
Bride	Ali Hazelwood	20/11/2003	200.00	Edit   Details   Delete
If Only I Had Told Her	Laura Nowlin	02/01/2010	189.00	Edit   Details   Delete
Why I am an Atheist	Bhagat Singh	03/11/2001	179.00	Edit   Details   Delete
Sita: Warrior of Mithila	Amish	10/04/2018	195.00	Edit   Details   Delete
All You Need Is Kill	Ryosuke Takeuchi	22/10/2020	289.00	Edit   Details   Delete
Sakamoto Days	Yuto Suzuki	06/12/2021	239.00	Edit   Details   Delete
Web Programming	Sanjay Sir	02/01/2010	189.00	Edit   Details   Delete

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Program28 Home Privacy

# **Details**

## Book

BookTitle Web Programming

AuthorName Sanjay Sir

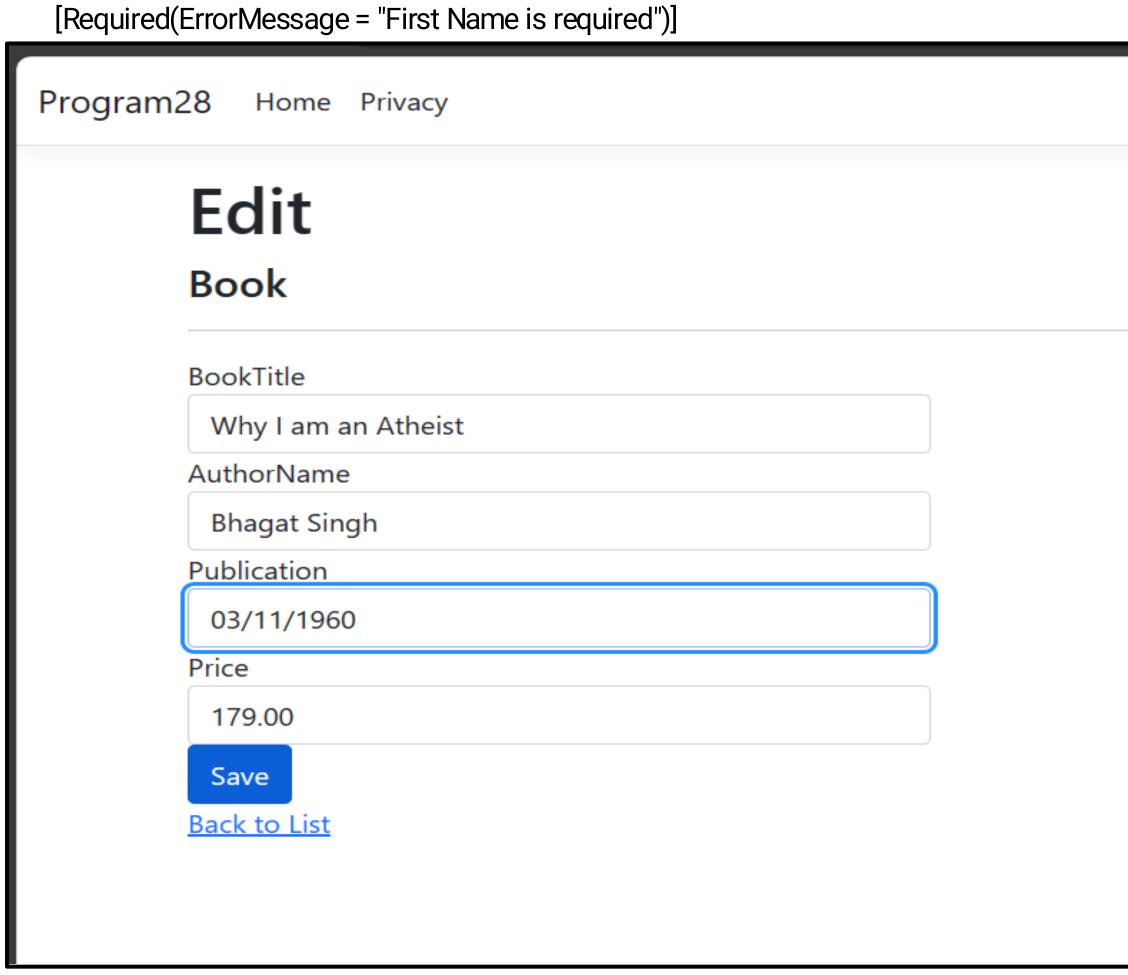
Publication 02/01/2010

**Price** 189.00

Edit | Back to List

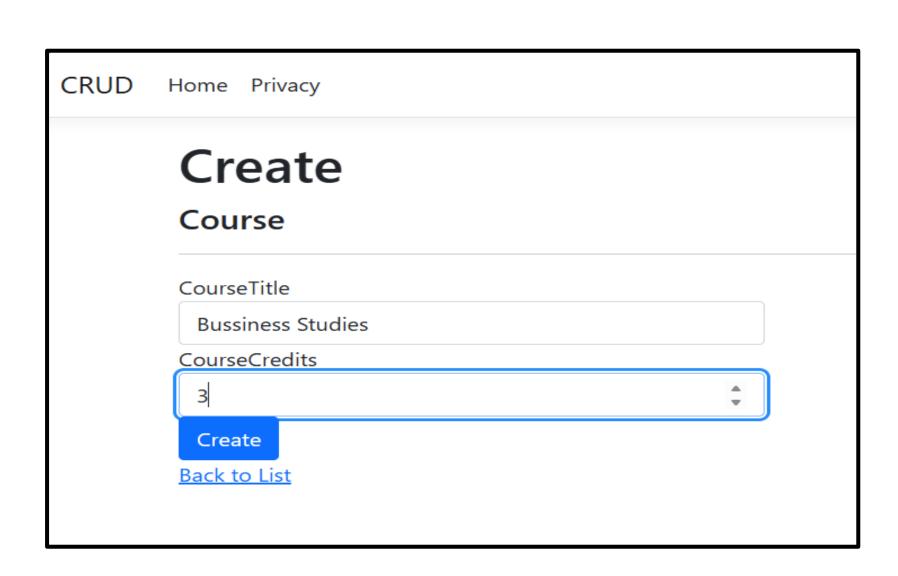
21. Develop ASP.NET Core MVC application to perform CRUD operation by using entity framework with validation on Student, Course and Enrollment models.

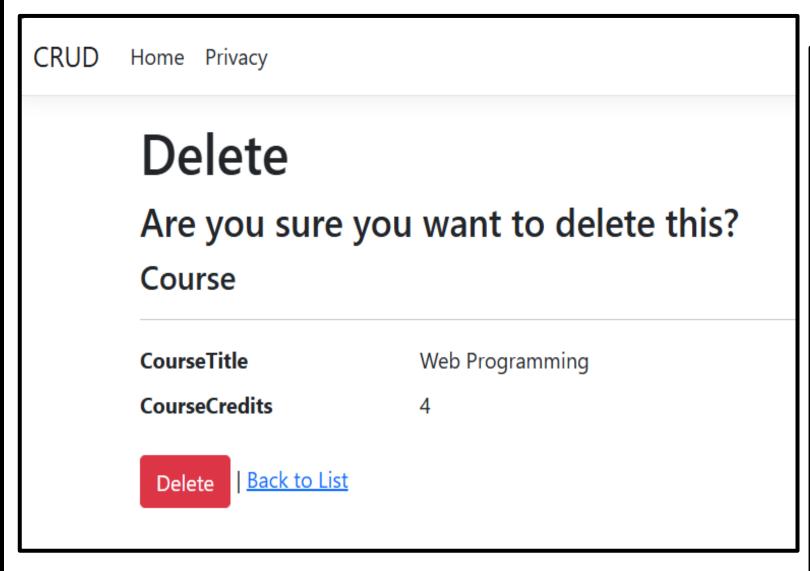
```
Ans - Student.cs
using System;
using System.Collections.Generic;
using System.ComponentModel.DataAnnotations;
namespace CRUD.Models
{
    public class Student
    {
        [Key]
        public int StudentID { get; set; }
}
```

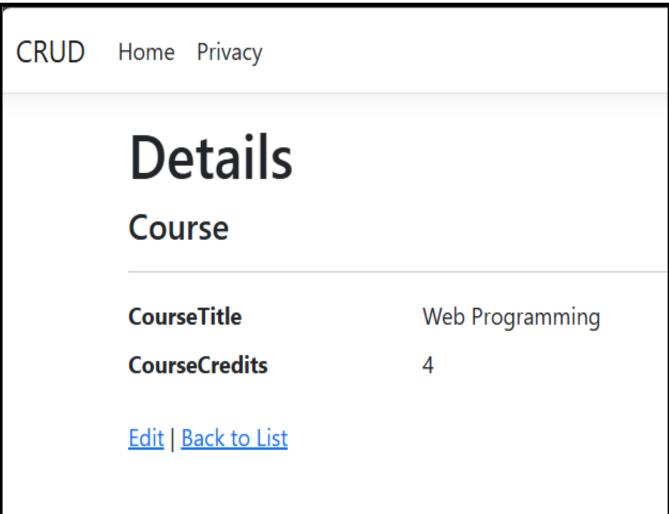


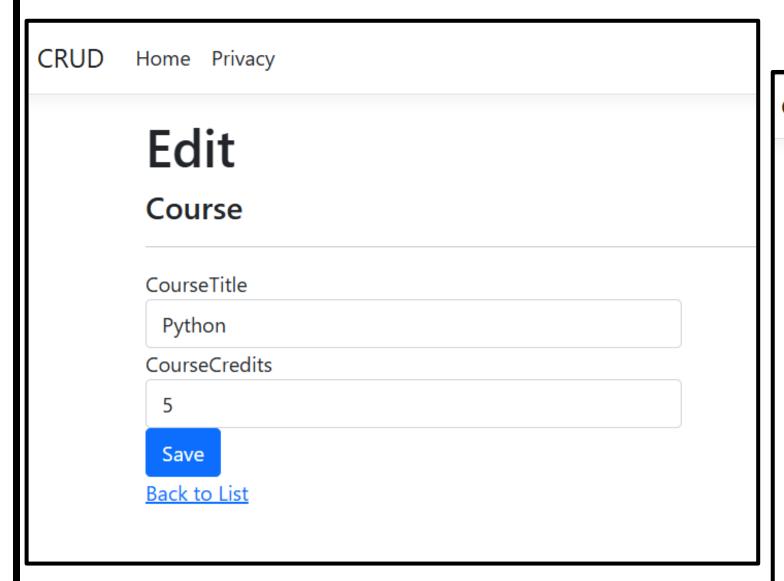
```
[StringLength(50)]
    public string FirstName { get; set; }
    [Required(ErrorMessage = "Last Name is required")]
    [StringLength(50)]
    public string LastMidName { get; set; }
    [DataType(DataType.Date)]
    [DisplayFormat(DataFormatString = "{0:yyyy-MM-dd}", ApplyFormatInEditMode = true)]
    public DateTime EnrollmentDate { get; set; }
    public ICollection<Enrollment> Enrollments { get; set; }
    public Student()
      Enrollments = new List<Enrollment>();
Course.cs
using System. Collections. Generic;
using System.ComponentModel.DataAnnotations;
namespace CRUD. Models
  public class Course
    [Key]
    public int CourseID { get; set; }
    [Required(ErrorMessage = "Course Title is required")]
    [StringLength(100, ErrorMessage = "Title cannot exceed 100 characters")]
    public string CourseTitle { get; set; }
    [Required(ErrorMessage = "Credits are required")]
```

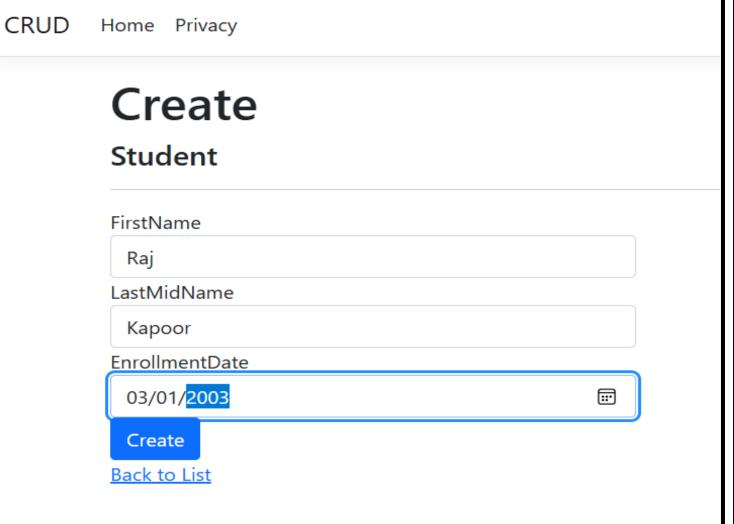
```
[Range(1, int.MaxValue, ErrorMessage = "Credits must be a positive number")]
    public int CourseCredits { get; set; }
    public ICollection<Enrollment> Enrollments { get; set; }
    public Course()
      Enrollments = new List<Enrollment>();
    } }}
Enrollment.cs
using System.ComponentModel.DataAnnotations.Schema;
using System.ComponentModel.DataAnnotations;
namespace CRUD. Models
  public class Enrollment
    [Key]
    public int EnrollmentID { get; set; }
    [Required(ErrorMessage = "CourseID is required")]
    public int CourseID { get; set; }
    [Required(ErrorMessage = "StudentID is required")]
    public int StudentID { get; set; }
    [DataType(DataType.Date)]
    [DisplayFormat(DataFormatString = "{0:yyyy-MM-dd}", ApplyFormatInEditMode = true)]
    public DateTime EnrollmentDate { get; set; }
    [ForeignKey("CourseID")]
    public Course? Course { get; set; }
    [ForeignKey("StudentID")]
    public Student? Student { get; set; }
 }}
```

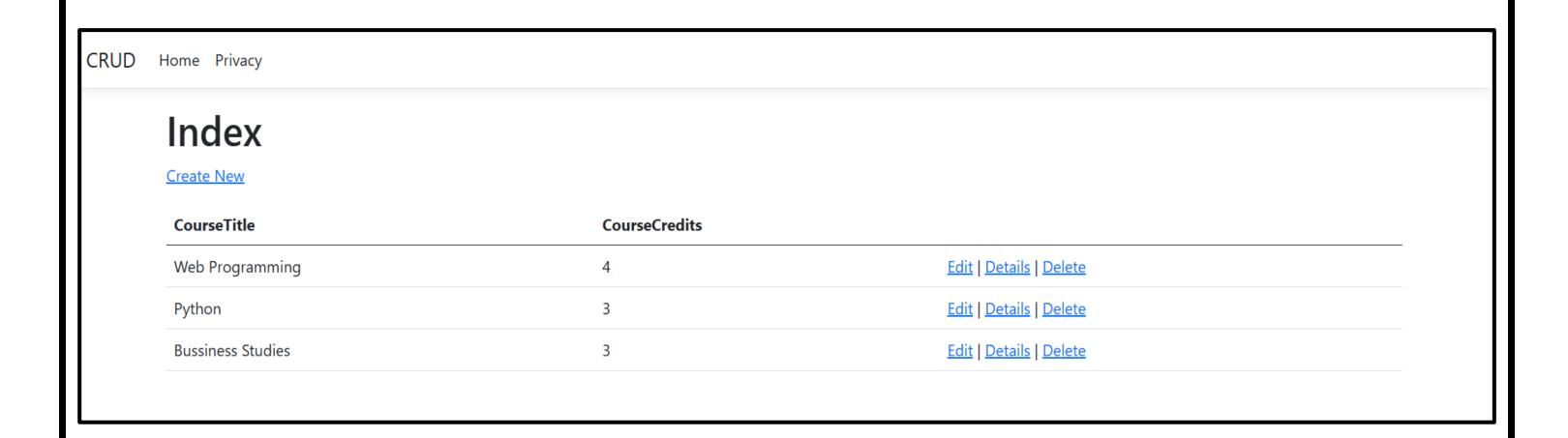


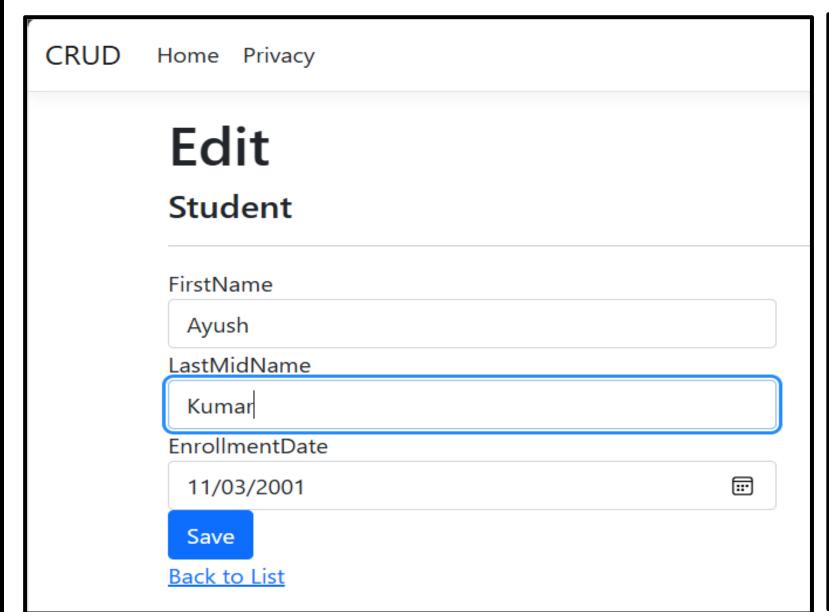


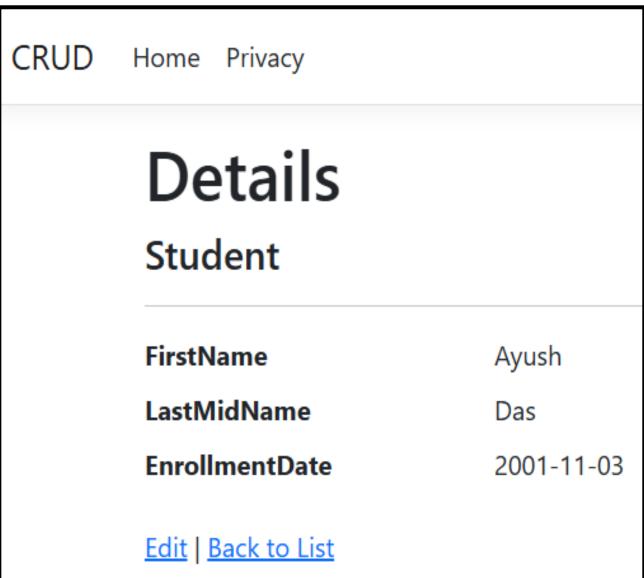


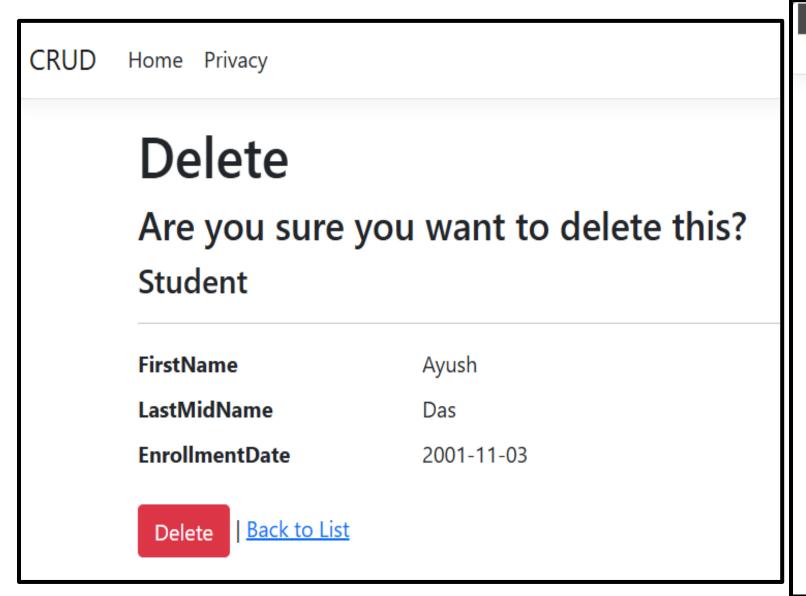


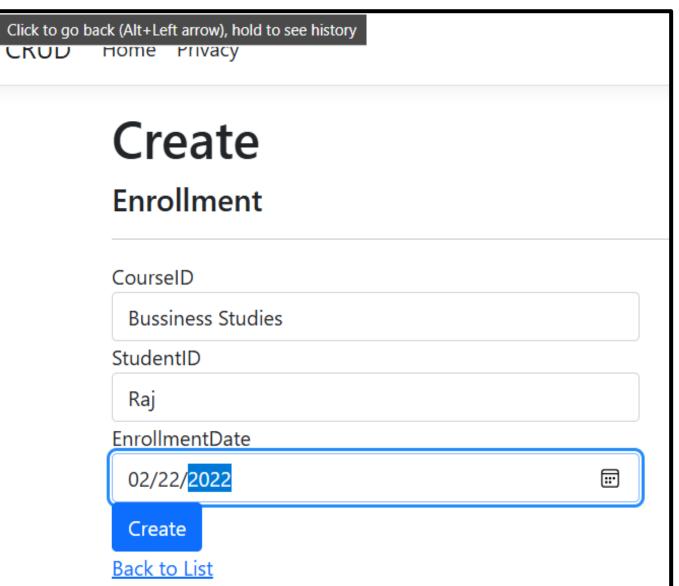


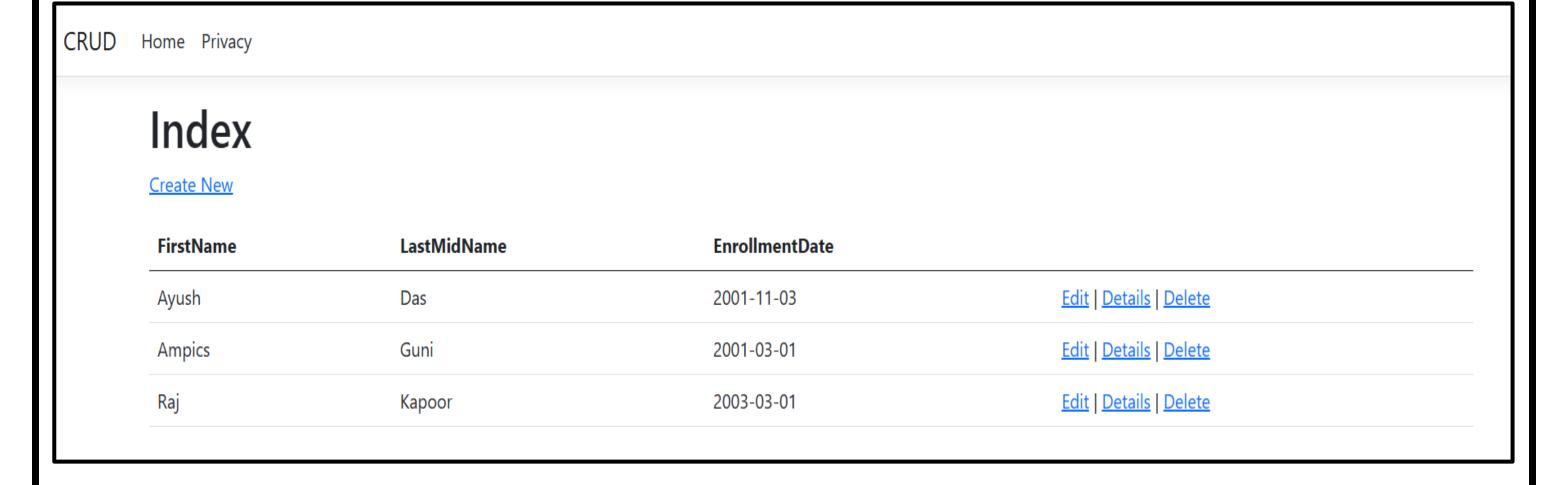


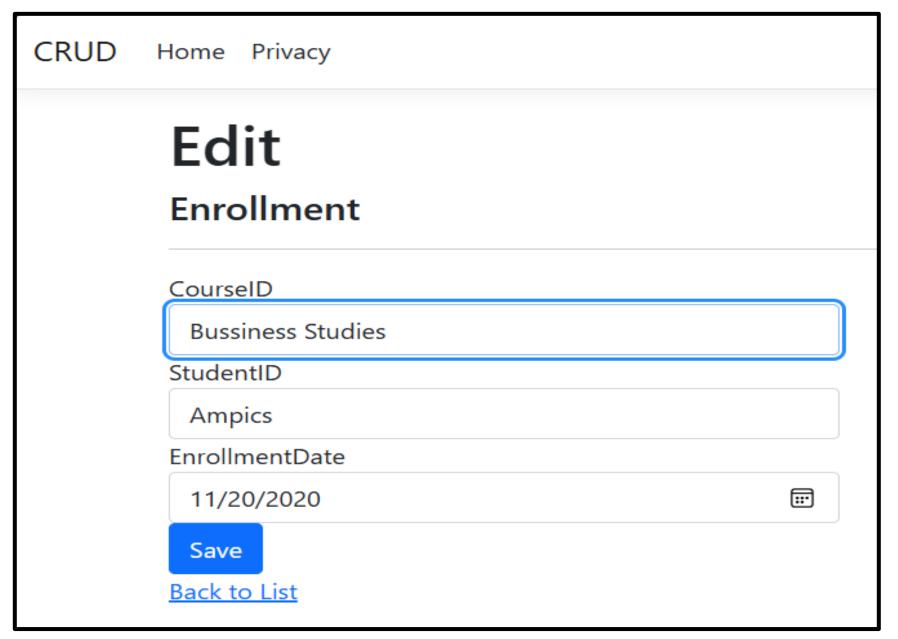


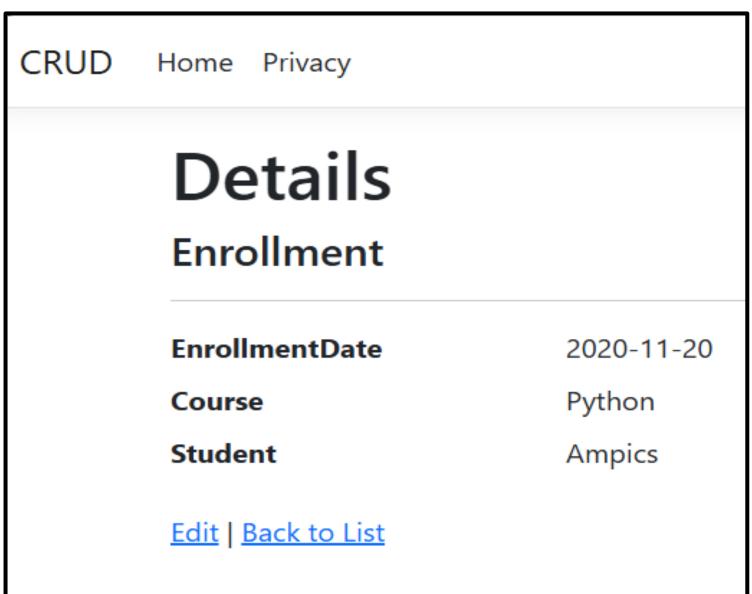












CRUD	Home Privacy			
	Index Create New			
	EnrollmentDate	Course	Student	
	2020-11-20	Python	Ampics	Edit   Details   Delete
	2022-02-22	Bussiness Studies	Raj	Edit   Details   Delete
	2001-03-22	Web Programming	Ayush	Edit   Details   Delete

CRUD Home Privacy

Delete
Are you sure you want to delete this?
Enrollment

EnrollmentDate 2020-11-20
Course Python
Student Ampics

Delete | Back to List