

PRACTICE #07: WEB PROGRAMMING

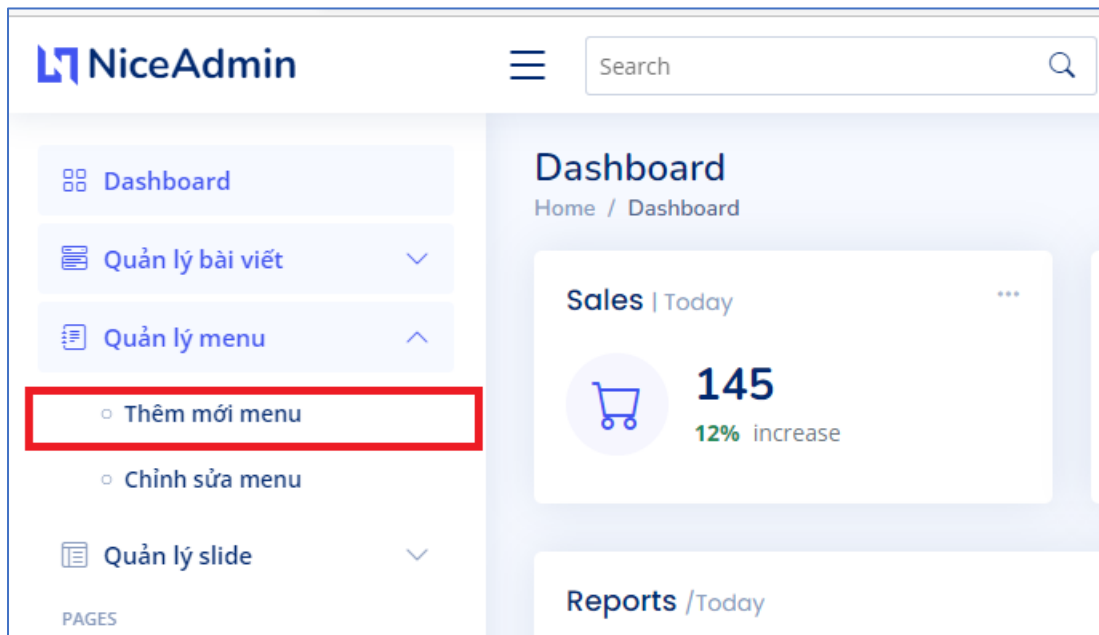
Lesson: Create-Read-Update-Delete (CRUD) with tblMenu in Admin page

Objectives:

- Create-Read-Update-Delete (CRUD) with tblMenu in Admin page

Preparation:

- Practice number #06



Instruction:

A. Display tblMenu in a page

1. In the table **AdminMenu**, change the content of the column **Controller** of the row **"Thêm mới menu"** into **Menu**:

AdiminMe...	ItemName	ItemLevel	ParentLevel	ItemOrder	IsActive	ItemTarget	AreaName	Controller...	ActionName	Icon	IdName
11	Thêm mới menu	2	10	1	True	NULL	Admin	Menu	Index	NULL	NULL
12	Chỉnh sửa menu	2	10	2	True	NULL	Admin	Home	Index	NULL	NULL
13	Quản lý slide	1	0	1	True	charts-nav	Admin	Home	Index	bi bi-bar-ch...	charts-nav
14	Thêm mới slide	2	13	1	True	NULL	Admin	Home	Index	NULL	NULL
15	Chỉnh sửa slide	2	13	2	True	NULL	Admin	Home	Index	NULL	NULL

2. Open project aznews:

- Add a controller **MenuController.cs** into the folder **Controllers** of **Admin**

EXPLORER

- AZNEWS
 - .vs
 - Areas\Admin
 - Components
 - AdminMenuComponent.cs
 - Controllers
 - HomeController.cs
 - MenuController.cs
 - Data
 - Models
 - AdminMenu.cs
 - Views
 - Home

C# MenuController.cs X

Areas > Admin > Controllers > C# MenuController.cs > ...

```

1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Threading.Tasks;
5
6  namespace aznews.Areas.Admin.Controllers
7  {
8      0 references
9      public class MenuController
10     {
11
12     }

```

- Add the following content to **MenuController.cs**

C# MenuController.cs X

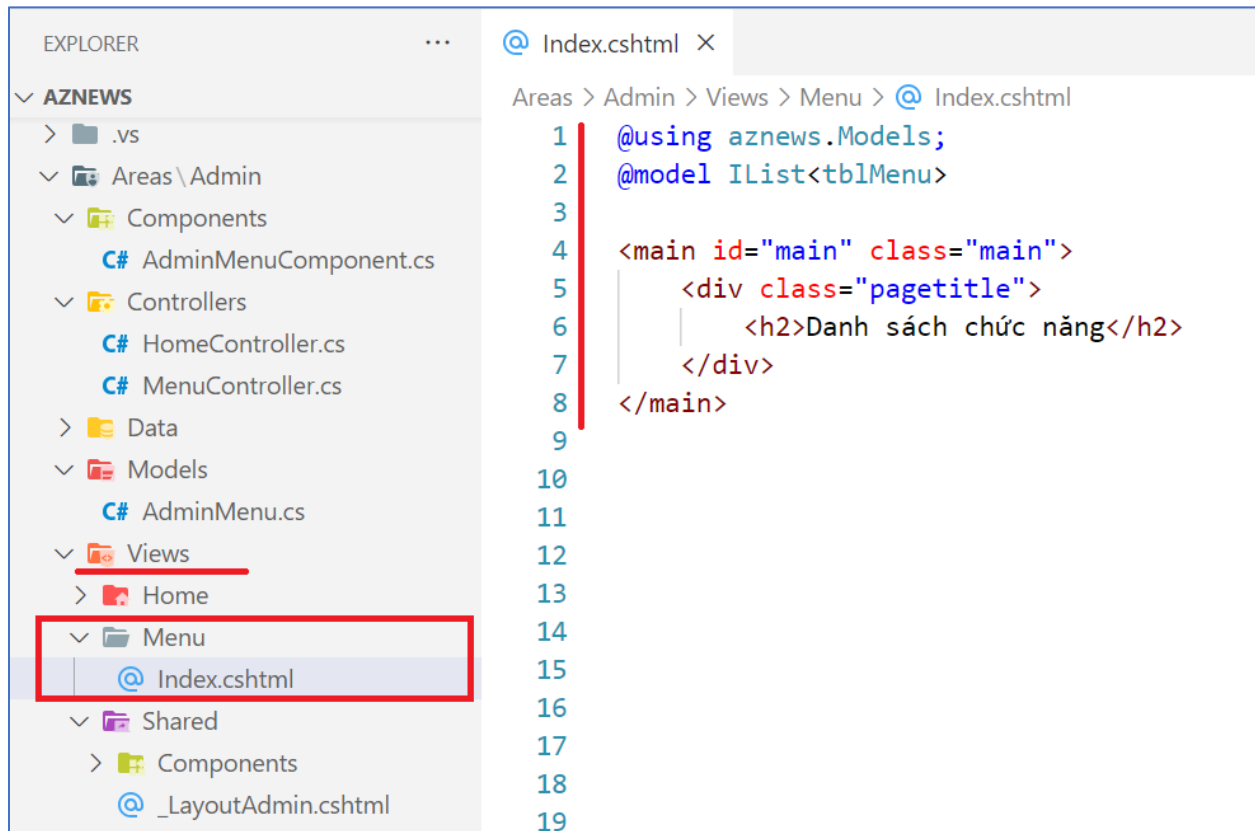
Areas > Admin > Controllers > C# MenuController.cs > ...

```

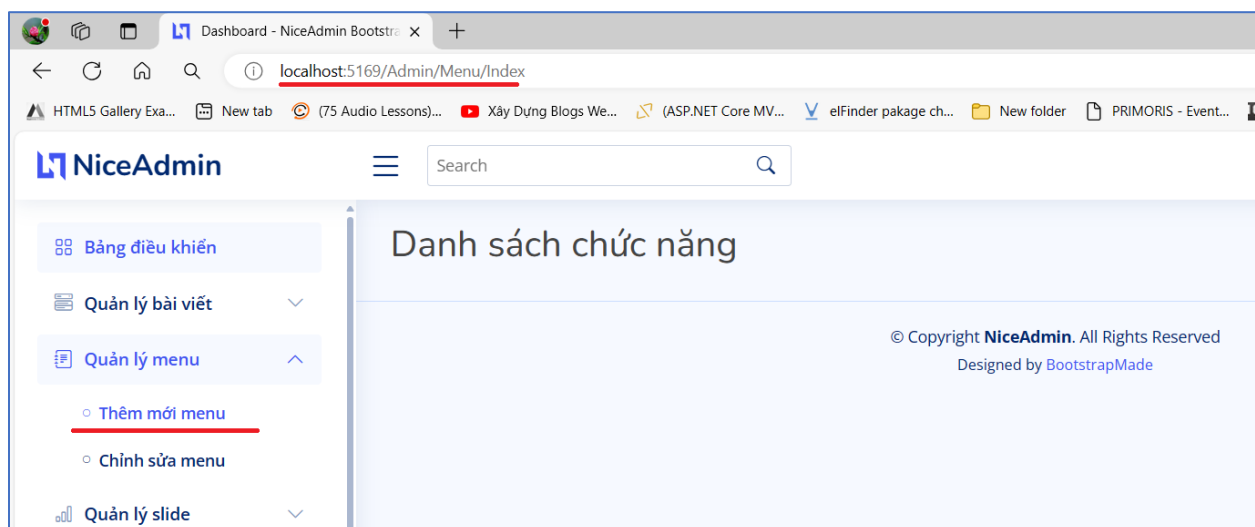
5  using aznews.Models;
6  using Microsoft.AspNetCore.Mvc;
7
8  namespace aznews.Areas.Admin.Controllers
9  {
10     [Area("Admin")]
11     public class MenuController : Controller
12     {
13         2 references
14         private readonly DataContext _context;
15         0 references
16         public MenuController(DataContext context)
17         {
18             _context = context;
19         }
20         0 references
21         public IActionResult Index()
22         {
23             var mnList = _context.Menus.OrderBy(m => m.MenuID).ToList();
24             return View(mnList);
25         }
26     }
27 }

```

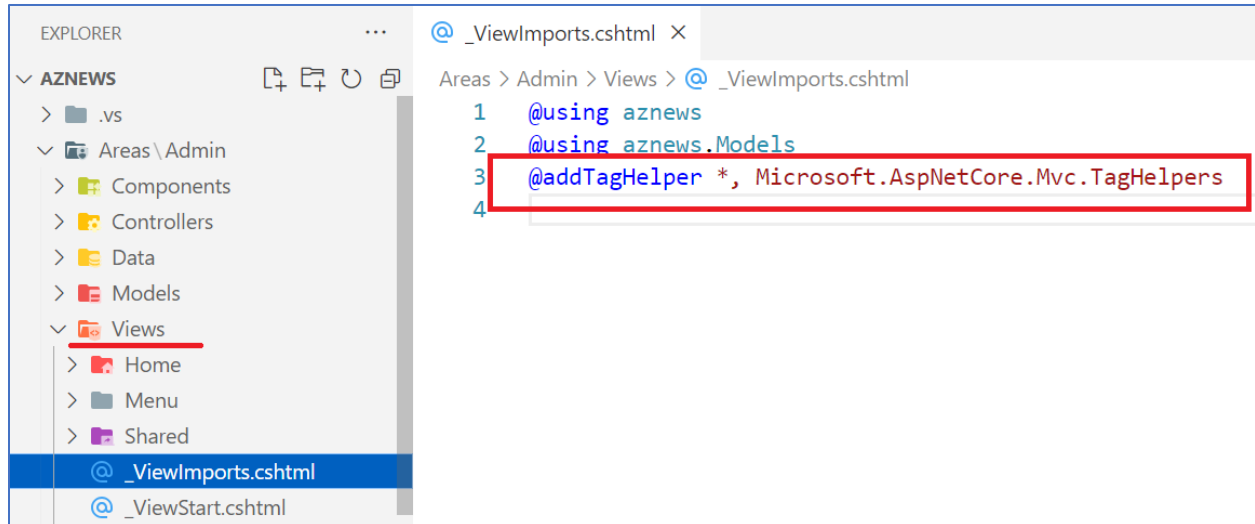
3. Add a folder **Menu** in **Views** of **Admin**, create a file **Index.cshtml** in the folder **Menu**, add the following information to Index.cshtml.



- Run the project, add /Admin after the url, click on “**Thêm mới menu**”:



4. Copy the file **_ViewImports.cshtml** in the folder **Views** of **aznews** to the folder **Views** of **Admin**

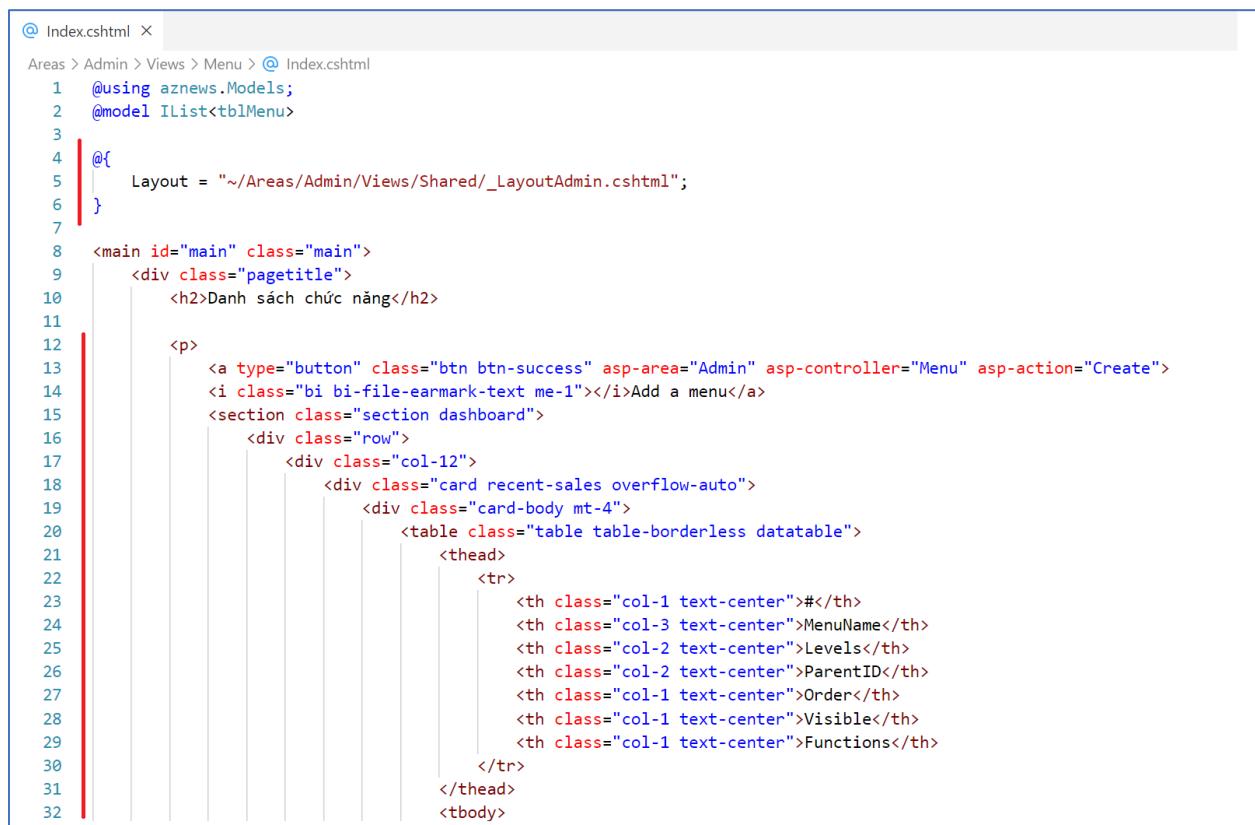


- Add the following line in the file **_ViewImports.cshtml** (if it does not exists)

`@addTagHelper *, Microsoft.AspNetCore.Mvc.TagHelpers`

5. Display the tblMenu in the web page

- Add the following information in the file **Index.cshtml** of **Admin/Menu**

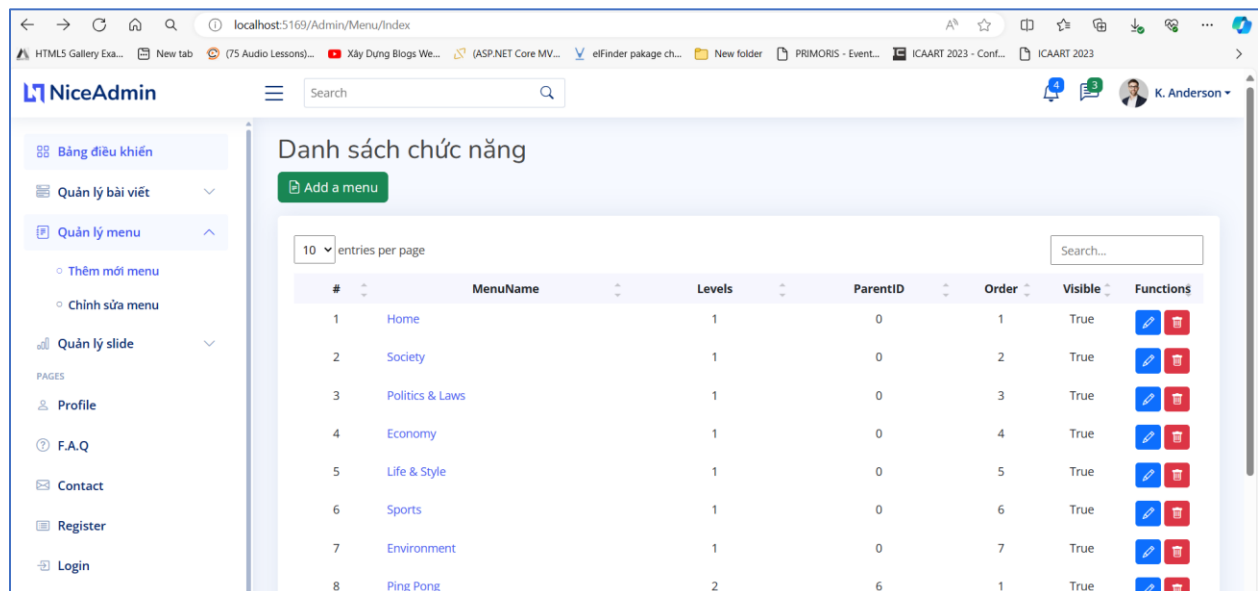


```

33      @foreach(var item in Model)
34      {
35          <tr>
36              <td class="text-center" scope="row">@item.MenuID</td>
37              <td class="text-left text-primary" scope="row"><a asp-area="Admin"
38                  asp-controller="Menu" asp-action="Details"
39                  asp-route-id="@item.MenuID">@item.MenuName</a></td>
40              <td class="text-center" scope="row">@item.Levels</td>
41              <td class="text-center" scope="row">@item.ParentID</td>
42              <td class="text-center" scope="row">@item.MenuOrder</td>
43              <td class="text-center" scope="row">@item.IsActive</td>
44              <td class="text-center" scope="row">
45                  <a asp-area="Admin" asp-controller="Menu" asp-action="Edit"
46                      asp-route-id="@item.MenuID" class="btn btn-primary btn-sm"
47                      title="Edit the menu"><i class="bi bi-pencil"></i></a>
48
49                  <a asp-area="Admin" asp-controller="Menu" asp-action="Delete"
50                      asp-route-id="@item.MenuID" class="btn btn-danger btn-sm"
51                      title="Delete the menu"><i class="bi bi-trash"></i></a>
52              </td>
53          </tr>
54      </tbody>
55  </table>
56  </div>
57  </div>
58  </div>
59  </div>
60  </div>
61  </div>
62  </section>
63  </p>
64  </div>
65  </main>

```

- Use the command: `dotnet watch run`, we will have the following web page:



B. Delete a record in the table tblMenu

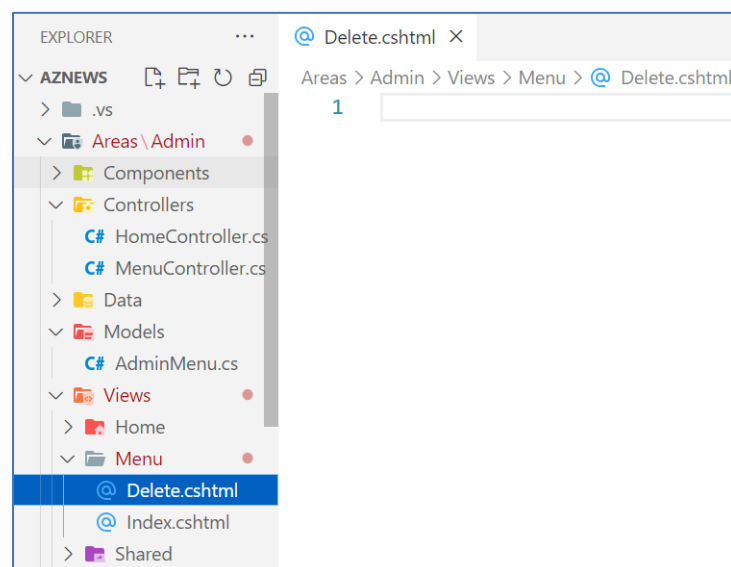
6. Add some **actions** in the **MenuController.cs** as follows:

```

C# MenuController.cs X
Areas > Admin > Controllers > C# MenuController.cs > MenuController > .ctor
12 public class MenuController : Controller
19     public IActionResult Index()
20     {
21         var mnList = _context.Menus.OrderBy(m => m.MenuID).ToList();
22         return View(mnList);
23     }
24     0 references
25     public IActionResult Delete(int? id)
26     {
27         if (id == null || id == 0)
28             return NotFound();
29         var mn = _context.Menus.Find(id);
30         if (mn == null)
31             return NotFound();
32         return View(mn);
33     }
34     [HttpPost]
35     0 references
36     public IActionResult Delete(int id)
37     {
38         var delMenu = _context.Menus.Find(id);
39         if (delMenu == null)
40             return NotFound();
41         _context.Menus.Remove(delMenu);
42         _context.SaveChanges();
43         return RedirectToAction("Index");
44     }
45 }

```

- Add a view named **Delete.cshtml** in the folder **Admin/Views/Menu**



7. Add the following content to **Delete.cshtml**:

```
Delete.cshtml X
Areas > Admin > Views > Menu > @ Delete.cshtml
1  @model aznews.Models.tblMenu
2  @{
3      Layout = "~/Areas/Admin/Views/Shared/_LayoutAdmin.cshtml";
4  }
5  <main id="main" class="main">
6      <div class="pagetitle">
7          <h2>Confirm to delete a menu</h2>
8      </div>
9      <div class="form-row">
10         <div class="form-group col-md-6">
11             <label asp-for="MenuID">MenuID</label>
12             <input type="text" class="form-control mb-3" asp-for="MenuID" disabled />
13         </div>
14         <div class="form-group col-md-6">
15             <label asp-for="MenuName">MenuName</label>
16             <input type="text" class="form-control mb-3" asp-for="MenuName" disabled />
17         </div>
18     </div>
19     <!-- Begin Form -->
20     <form asp-action="Delete" method="Post">
21         <input type="hidden" asp-for="MenuID" />
22         <a class="btn btn-lg btn-warning p-2 mr-5" href="javascript:history.back()">
23             <i class="bi bi-arrow-left-circle"></i> Go back
24         </a>
25         <button type="submit" class="btn btn-lg btn-danger p-2">
26             <i class="bi bi-trash"></i> Delete
27         </button>
28     </form>
29     <!-- End Form -->
30 </main>
```

C. Insert a record to the table tblMenu

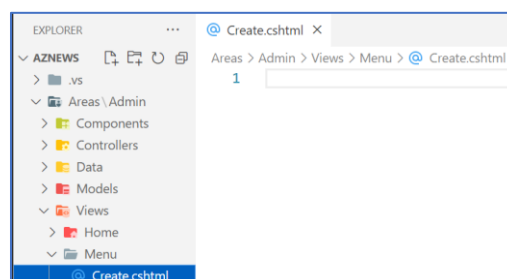
8. Add following actions in **MenuController.cs** as follows (action Create):

```

C# MenuController.cs X
Areas > Admin > Controllers > C# MenuController.cs > MenuController > Create
13      public class MenuController : Controller
35      {
36          public IActionResult Delete(int id)
37          {
38              var delMenu = _context.Menus.Find(id);
39              if (delMenu == null)
40                  return NotFound();
41              _context.Menus.Remove(delMenu);
42              _context.SaveChanges();
43              return RedirectToAction("Index");
44          }
45          0 references
46          public IActionResult Create()
47          {
48              var mnList = (from m in _context.Menus
49                          select new SelectListItem()
50                          {
51                              Text = (m.Levels == 1) ? m.MenuName : "-- " + m.MenuName,
52                              Value = m.MenuID.ToString()
53                          }).ToList();
54              mnList.Insert(0, new SelectListItem()
55              {
56                  Text = "--- select ---",
57                  Value = "0"
58              });
59              ViewBag.mnList = mnList;
60              return View();
61          }
62          [HttpPost]
63          0 references
64          public IActionResult Create(tblMenu mn)
65          {
66              if (ModelState.IsValid)
67              {
68                  _context.Menus.Add(mn);
69                  _context.SaveChanges();
70                  return RedirectToAction("Index");
71              }
72              return View(mn);
73          }
74      }

```

9. Create a file **Create.cshtml** in the folder **Admin/Views/Menu** as follows:



- Add the following content to **Create.cshtml**:

```

Create.cshtml X
Areas > Admin > Views > Menu > Create.cshtml
1  @model aznews.Models.tblMenu
2  @{
3      Layout = "~/Areas/Admin/Views/Shared/_LayoutAdmin.cshtml";
4  }
5  <main id="main" class="main">
6      <div class="pagetitle">
7          <h2>Add a menu item</h2>
8      </div>
9      <div class="container shadow p-5">
10         <form method="Post" asp-action="Create">
11             <div class="form-row">
12                 <div class="form-group col-md-6 mb-3">
13                     <label>Menu name</label>
14                     <input type="text" class="form-control" asp-for="MenuName" placeholder="Menu name...">
15                     <span asp-validation-for="MenuName" class="alert-danger"></span>
16                 </div>
17
18                 <div class="form-group col-md-6 mb-3">
19                     <label>Levels</label>
20                     <select asp-for="Levels" class="form-select" id="Levels">
21                         <option value="1">1</option>
22                         <option value="2">2</option>
23                     </select>
24                 </div>
25
26                 <div class="form-group col-md-6 mb-3">
27                     <label>ParentID</label>
28                     <select asp-for="ParentID" class="form-control"
29                         asp-items="@((new SelectList(ViewBag.mnList, "Value", "Text")))">
30                     </select>
31                 </div>
32
33                 <div class="form-group col-md-6 mb-3">
34                     <label>Link</label>
35                     <input type="text" class="form-control" asp-for="Link"
36                         placeholder="Enter the link...">
37                 </div>
38
39                 <div class="form-group col-md-6 mb-3">
40                     <label>Menu order</label>
41                     <input type="text" class="form-control" asp-for="MenuOrder"
42                         value="0" placeholder="Enter the order of item...">
43                 </div>
44
45                 <div class="form-group col-md-6 mb-3">
46                     <label>Position</label>
47                     <input type="text" class="form-control" asp-for="Position"
48                         value="1" placeholder="Enter the position...">
49                 </div>
50
51                 <div class="form-group col-md-6 mb-3">
52                     <label>
53                         @Html.CheckBox("IsActive", false)
54                         Visible
55                     </label>
56                 </div>
57             </div>
58
59             <a asp-controller="Menu" asp-action="Index" class="btn btn-lg btn-warning p-2">
60                 <i class="bi bi-arrow-left-circle"></i>
61                 Go back
62             </a>
63
64             <button type="submit" class="btn btn-lg btn-primary p-2">
65                 <i class="bi bi-file-plus-fill"></i> Save information
66             </button>
67         </form>
68     </div>
69 </main>
70

```

- Run the project and click to the button “**Add a menu**”, the following web page will be displayed.

The screenshot shows a web browser at localhost:5169/Admin/Menu/Create. The page has a sidebar with navigation links like 'Bảng điều khiển', 'Quản lý bài viết', 'Quản lý menu', 'Quản lý slide', 'Profile', 'F.A.Q', 'Contact', 'Register', 'Login', 'Error 404', and 'Blank'. The main content area is titled 'Add a menu item' and contains a form with the following fields:

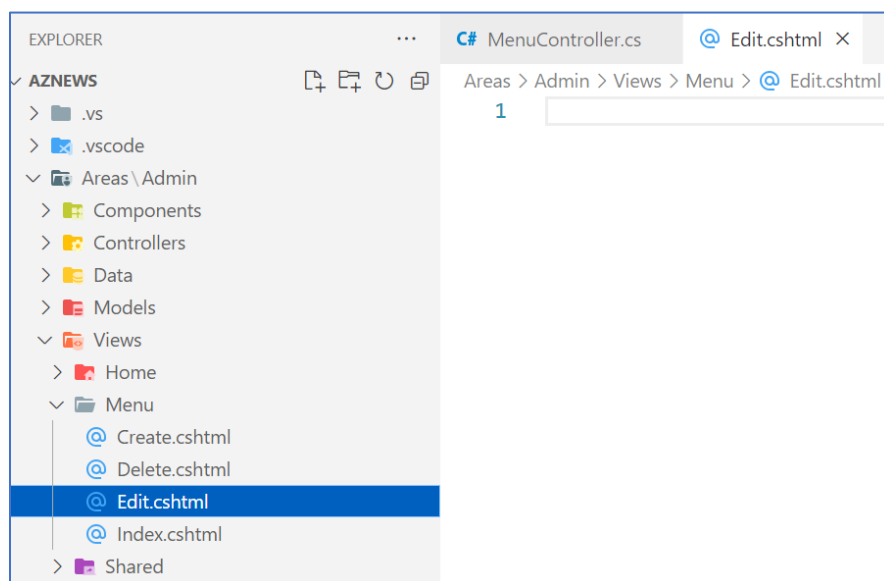
- Menu name: A text input field with placeholder text 'Menu name...'.
- Levels: A dropdown menu currently showing '1'.
- ParentID: A dropdown menu with '--- select ---'.
- Link: A text input field with placeholder text 'Enter the link...'.
- Menu order: A text input field with the value '0'.
- Position: A text input field with the value '1'.
- Visible: A checkbox that is currently unchecked.

At the bottom of the form are two buttons: 'Go back' (yellow) and 'Save information' (blue).

- You can input the required information to add a menu item to the table **tblMenu**.

D. Edit a record in the table **tblMenu**

10. Add a file **Edit.cshtml** in the folder **Admin/Views/Menu** as follows:



11. Add the following actions in the file **MenuController.cs**:

```

C# MenuController.cs ×
Areas > Admin > Controllers > C# MenuController.cs > MenuController > Edit
13      public class MenuController : Controller

61      0 references
62      public IActionResult Create(tblMenu mn)
63      {
64          if (ModelState.IsValid)
65          {
66              _context.Menus.Add(mn);
67              _context.SaveChanges();
68              return RedirectToAction("Index");
69          }
70          return View(mn);
71      }

72      0 references
73      public IActionResult Edit(int? id)
74      {
75          if (id == null || id == 0)
76              return NotFound();
77
78          var mn = _context.Menus.Find(id);
79          if (mn == null)
80              return NotFound();
81
82          var mnList = (from m in _context.Menus
83                      select new SelectListItem()
84                      {
85                          Text = (m.Levels == 1) ? m.MenuName : "-- " + m.MenuName,
86                          Value = m.MenuID.ToString()
87                      }).ToList();
88          mnList.Insert(0, new SelectListItem()
89          {
90              Text = "--- select ---",
91              Value = "0"
92          });
93          ViewBag.mnList = mnList;
94          return View(mn);
95      }

96      [HttpPost]
97      0 references
98      public IActionResult Edit(tblMenu mn)
99      {
100         if (ModelState.IsValid)
101         {
102             _context.Menus.Update(mn);
103             _context.SaveChanges();
104             return RedirectToAction("Index");
105         }
106         return View(mn);

```

12. Copy the content of **Create.cshtml** to **Edit.cshtml** and modify the following lines (red color):

```
@ Edit.cshtml X
Areas > Admin > Views > Menu > @ Edit.cshtml
1 @model aznews.Models.tblMenu
2 @{
3     Layout = "~/Areas/Admin/Views/Shared/_LayoutAdmin.cshtml";
4 }
5 <main id="main" class="main">
6     <div class="pagetitle">
7         <h2>Edit a menu item</h2>
8     </div>
9     <div class="container shadow p-5">
10        <form method="Post" asp-action="Edit">
11            <div class="form-row">
12
13                <input type="text" class="form-control" asp-for="MenuID" type="hidden">
14
15                <div class="form-group col-md-6 mb-3">
16                    <label>Menu name</label>
17                    <input type="text" class="form-control" asp-for="MenuName" placeholder="Menu name...">
18                    <span asp-validation-for="MenuName" class="alert-danger"></span>
19                </div>
20
21                <div class="form-group col-md-6 mb-3">
22                    <label>Levels</label>
23                    <select asp-for="Levels" class="form-select" id="Levels">
24                        <option value="1">1</option>
25                        <option value="2">2</option>
26                    </select>
27                </div>
28
29                <div class="form-group col-md-6 mb-3">
30                    <label>ParentID</label>
31                    <select asp-for="ParentID" class="form-control"
32                        asp-items="@((new SelectList(ViewBag.mnList, "Value", "Text")))">
33                    </select>
34                </div>
35
36                <div class="form-group col-md-6 mb-3">
37                    <label>Link</label>
38                    <input type="text" class="form-control" asp-for="Link"
39                        placeholder="Enter the link...">
40                </div>
41
42                <div class="form-group col-md-6 mb-3">
43                    <label>Menu order</label>
44                    <input type="text" class="form-control" asp-for="MenuOrder"
45                        placeholder="Enter the order of item...">
46                </div>
47
48                <div class="form-group col-md-6 mb-3">
49                    <label>Position</label>
50                    <input type="text" class="form-control" asp-for="Position"
51                        placeholder="Enter the position...">
52                </div>
53
54                <div class="form-group col-md-6 mb-3">
55                    <label>
56                        @Html.CheckBox("IsActive", Model.IsActive)
57                        Visible
58                    </label>
59                </div>
60            </div>
61
62            <a asp-controller="Menu" asp-action="Index" class="btn btn-lg btn-warning p-2">
63                <i class="bi bi-arrow-left-circle"></i>
64                Go back
65            </a>
66
67            <button type="submit" class="btn btn-lg btn-primary p-2">
68                <i class="bi bi-file-plus-fill"></i> Save information
69            </button>
70        </form>
71    </div>
72 </main>
```

- Run and check the result of editing.