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ASP.NET Globalization and Localization in MVC 4

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Saineshwar Bageri

Updated date Feb 20 2015

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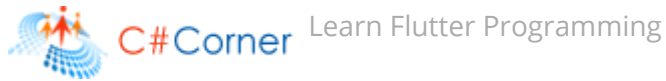
Introduction

In simple step I will show you to make you application globalize and localize in MVC 4.

I am writing this article because I found that there are not good and clean example of Globalization and Localization and many developer wont get any proper output from searching on Google . If you go hunting for Globalization and Localization for ASP.NET Webforms then you will get many cool example on this.

I to wrote Globalization and Localization in ASP.NET Webforms here is URL you can have a look at it: [What is Globalization and Localization in ASP.Net.](#)

Before starting let's have look at definition of globalization and localization below.



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(multiple cultures).

Localization, on the other hand, is the process of customization to make our application behave depending on the current culture and locale. These two things go together.



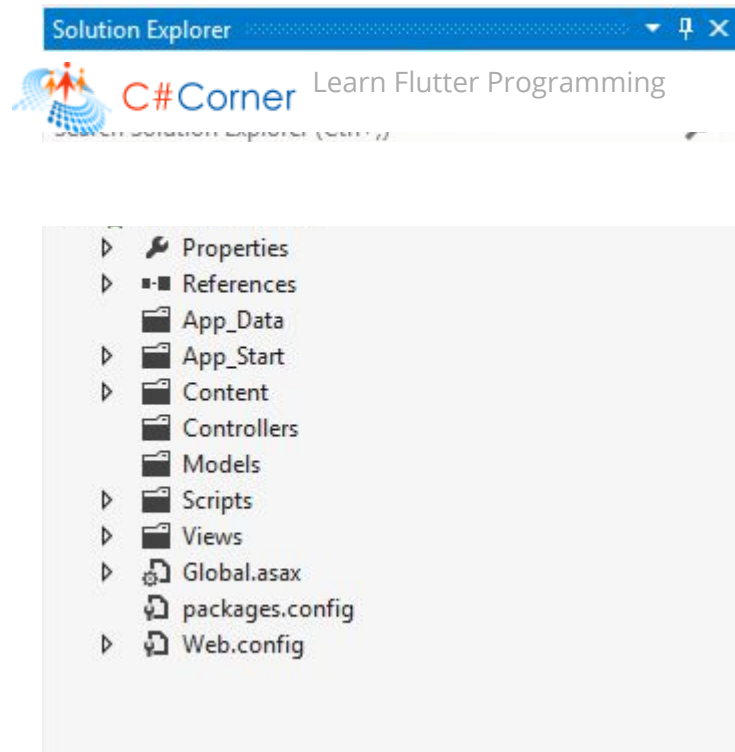
Image is used from: [Globalization](#).

Getting Started

Create MVC application

In Visual Studio 2013 select "File" from the menu and inside that select Project and then a New Dialog will popup with the name New project.

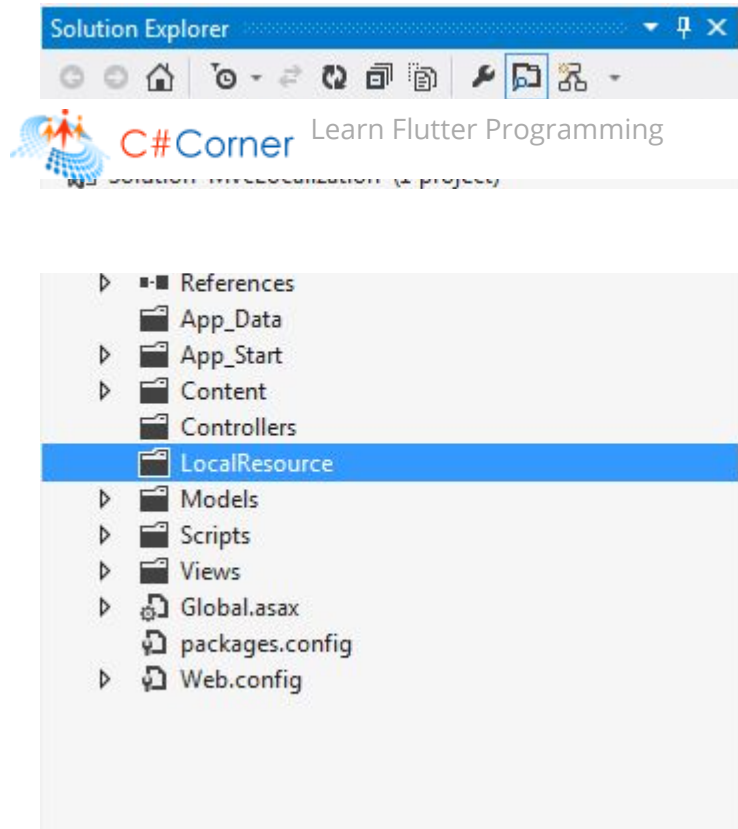
Inside that select Templates then select Visual C# and then inside that select web then select ASP.NET MVC 4 Web Application. Name your project "MvcLocalization" and then click OK.



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After this let's start with adding a resource to your application.

Before adding a resource I am will just create a folder named "LocalResource" and inside this I will add a resource.



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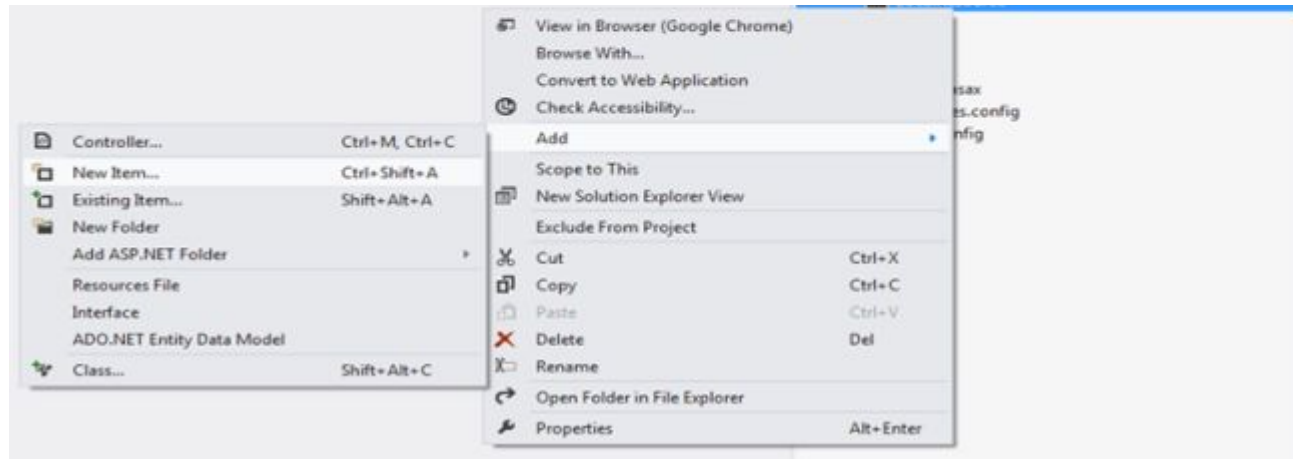
Now to add the resource

- The Main Resource should be "Resource.resx".
- For the English you can add "Resource.en-GB.resx".
- For Marathi you can add "Resource.mr-IN.resx".
- For Hindi you can add "Resource.hi-IN.resx".
- For Arabic you can add "Resource.ar-SA.resx".

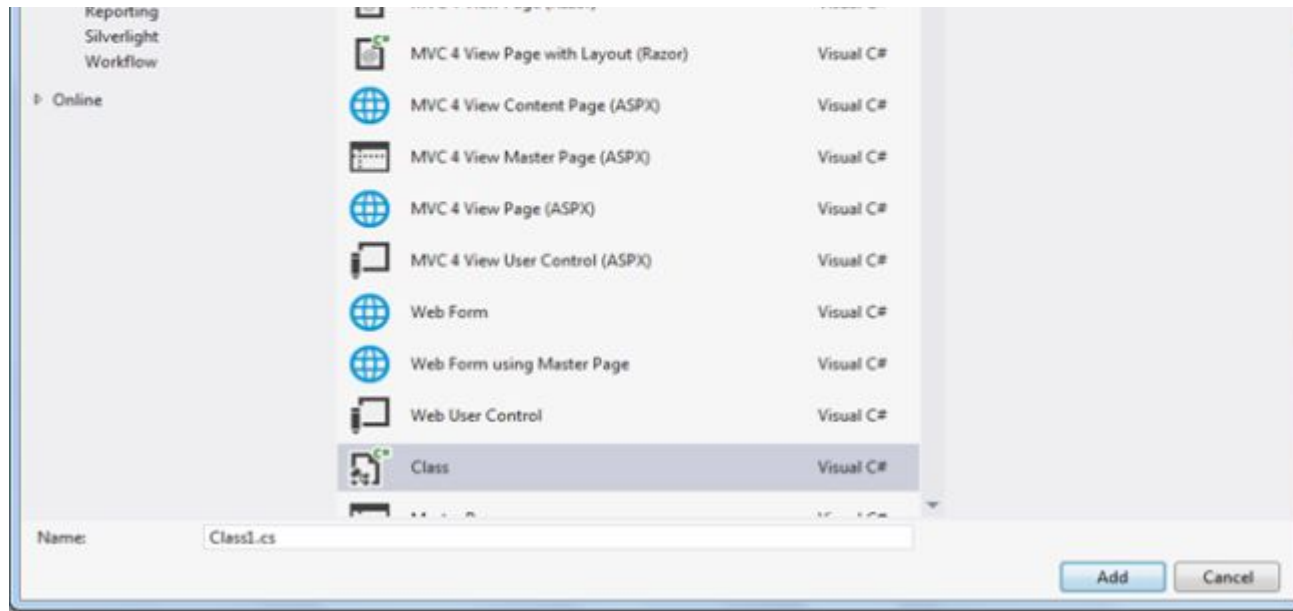
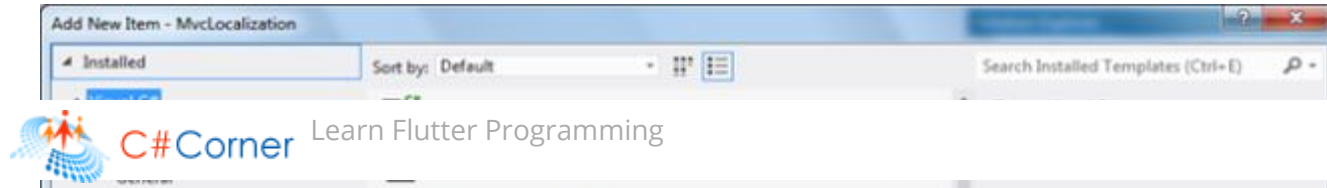
For adding the resource just right-click on the LocalResource folder then for inside what we just added select Add and then New Item.



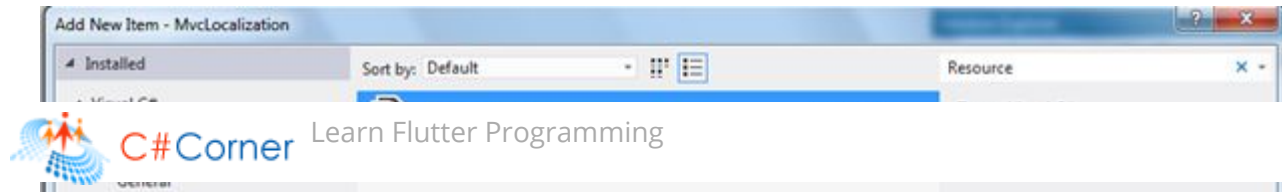
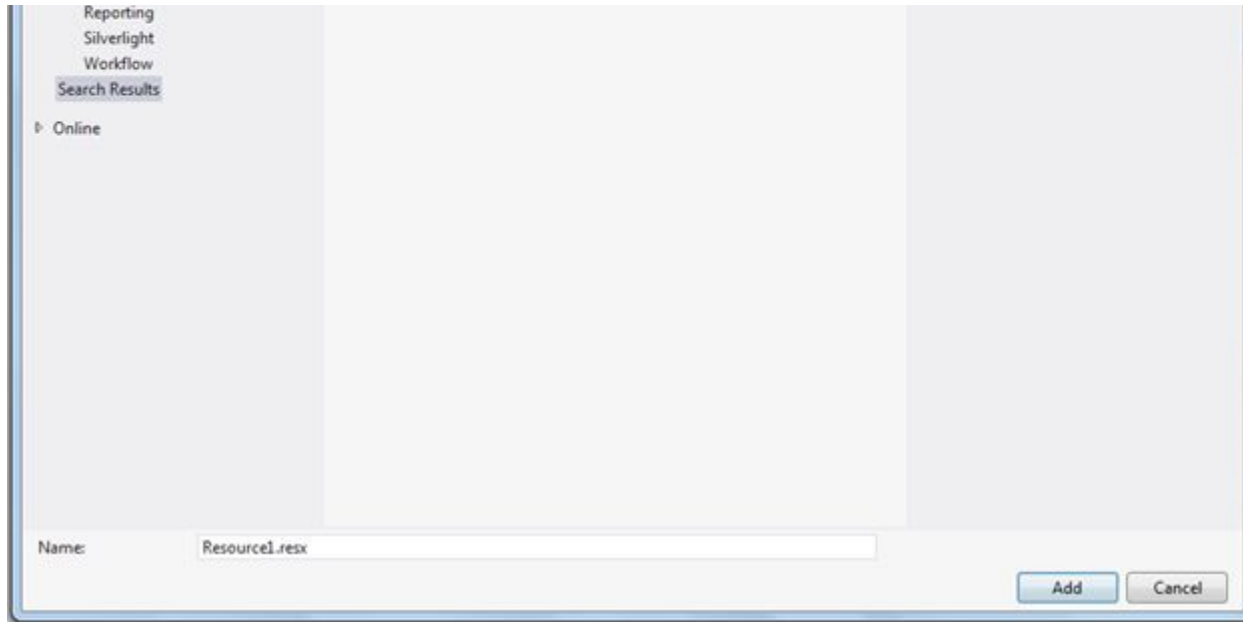
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A New Dialog will popup with name the Add New Item.



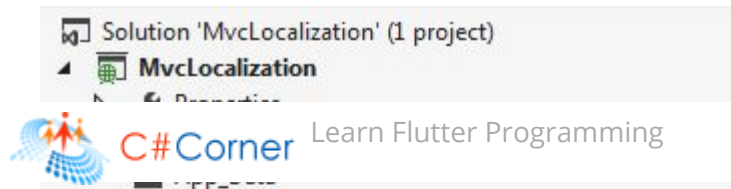
Inside the new dialog at the right side is a search box, type resource.

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Then I will name my first resource file "Resource.resx".

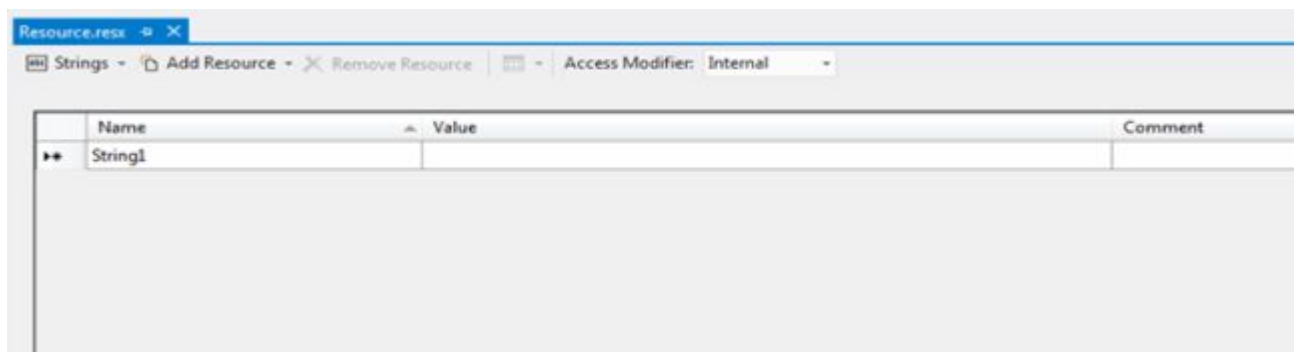
In a similar way we will add all other resources with the given names as above.

After adding all the resources your LocalResource folder will look as in the following snapshot.

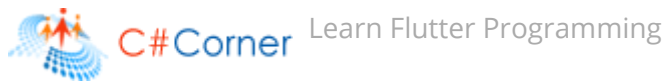
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1. Add some data

Let us add some data to these files. Open "Resource.resx".



Then just check the Access Modifier dropdownlist and make it Public.



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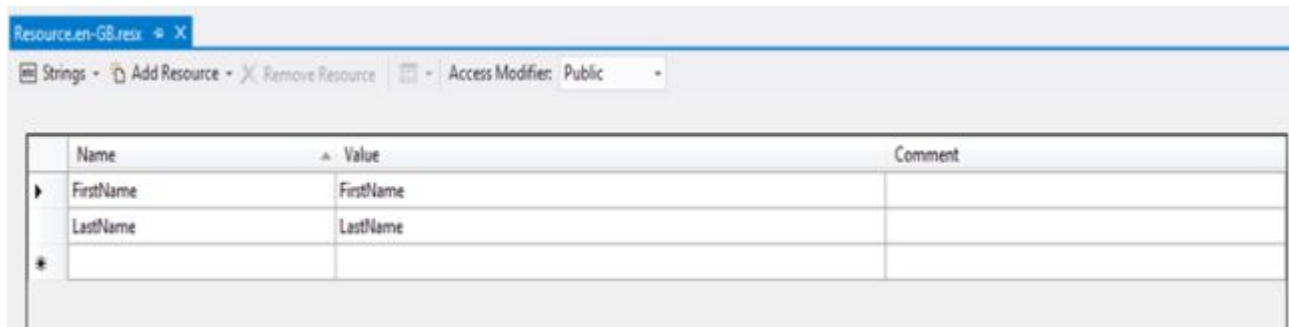


Name	Value	Comment
FirstName		
LastName		
*		

Save and close Resource.resx.

2. Open "Resource.en-GB.resx"

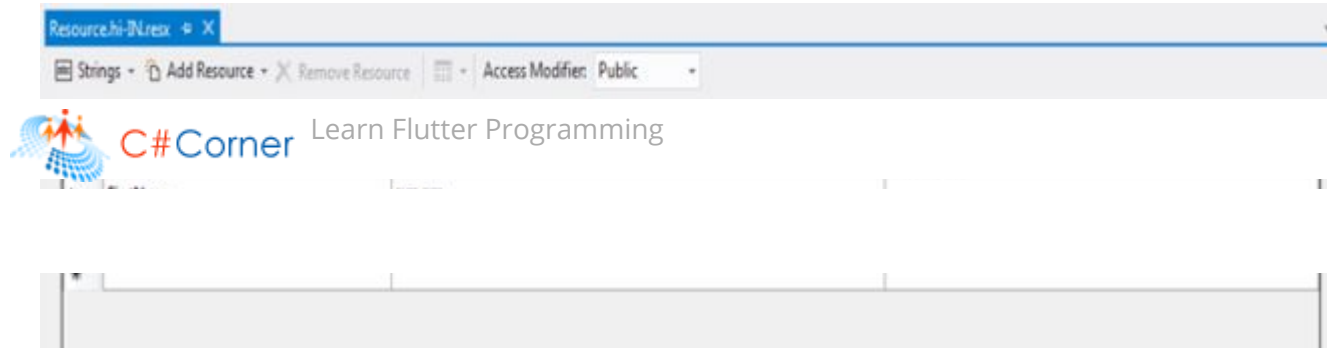
Add a name under the "Resource.en-GB.resx" filename and the value that you want to display in the value field.



Name	Value	Comment
FirstName	FirstName	
LastName	LastName	
*		

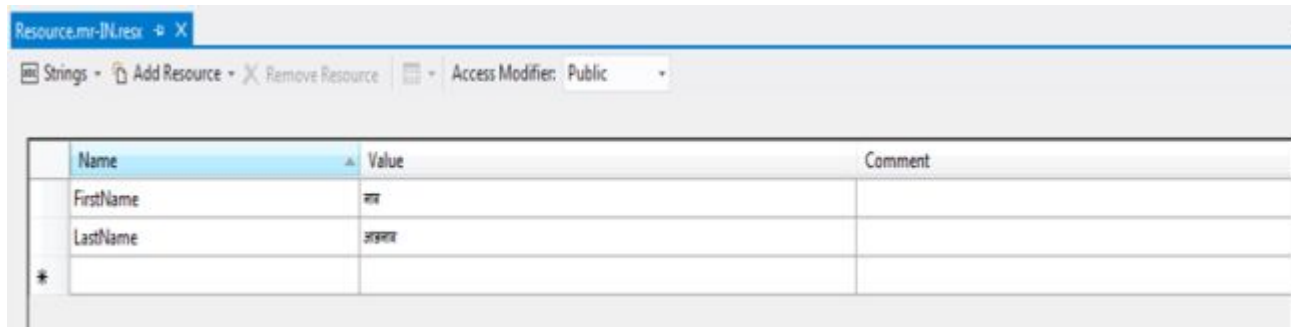
3. Open Resource.hi-IN.resx

Add a name under the "Resource.hi-IN.resx" filename and the value that you want to display in the value field.



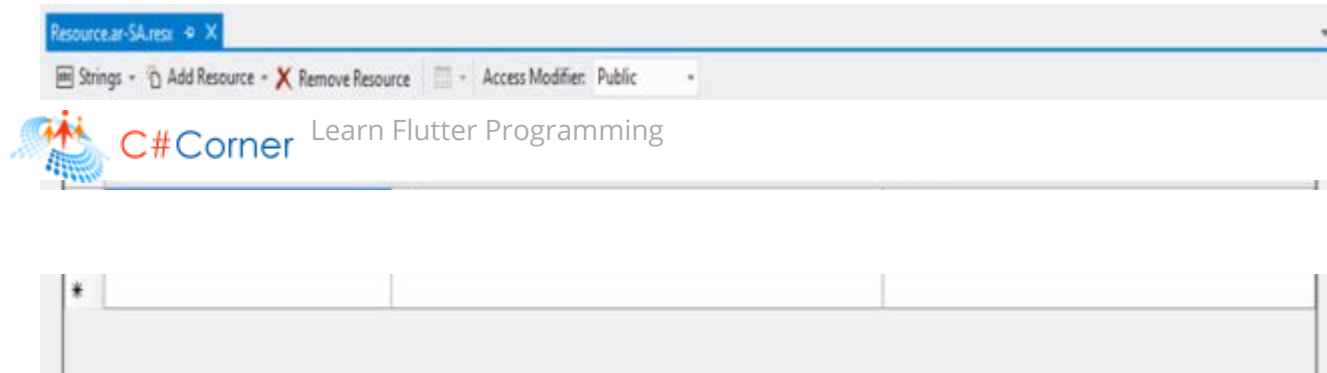
4. Open "Resource.mr-IN.resx"

Add a name under the "Resource.mr-IN.resx" filename and the value that you want to display in the value field.



5. Open "Resource.ar-SA.resx"

Add a name under the "Resource.ar-SA.resx" filename and the value that you want to display in the value field.



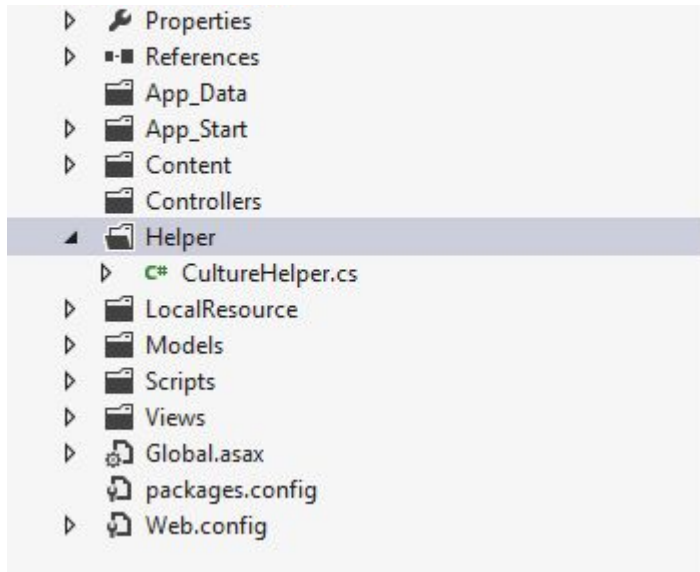
Adding Model and Attribute to Properties.

Now add a model with the name "Userdetails.cs" and then add a display attribute with the name similar to the resource "Name" column and then add **ResourceType = typeof(Resource)**.

```
01. using System;
02. using System.Collections.Generic;
03. using System.ComponentModel.DataAnnotations;
04. using System.Linq;
05. using System.Web;
06. using MvcLocalization.LocalResource;
07.
08. namespace MvcLocalization.Models
09. {
10.     public class Userdetails
11.     {
12.         [Display(Name = "FirstName", ResourceType = typeof(Resource))]
13.         public string FirstName { get; set; }
14.
15.         [Display(Name = "LastName", ResourceType = typeof(Resource))]
16.         public string LastName { get; set; }
17.     }
18. }
```

Adding custom class with name CultureHelper.cs

Now after completing the model now add a class with the name "CultureHelper.cs" in the new folder "Helper". This class sets the Culture with the use of threading.

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Here is a code snippet of the CultureHelper class.

```
01. using System;
02. using System.Collections.Generic;
03. using System.Linq;
04. using System.Web;
05. using System.Web.SessionState;
06. using System.Threading;
07. using System.Globalization;
08.
09. namespace MvcLocalization.Helper
10. {
11.     public class CultureHelper
12.     {
13.         protected HttpSessionState session;
```




```
14.
15. //constructor
16. public CultureHelper(HttpSessionState httpSessionState)
```

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```
21. public static int CurrentCulture
22. {
23.     get
24.     {
25.         if (Thread.CurrentThread.CurrentUICulture.Name == "en-GB")
26.         {
27.             return 0;
28.         }
29.         else if (Thread.CurrentThread.CurrentUICulture.Name == "hi-IN")
30.         {
31.             return 1;
32.         }
33.         else if (Thread.CurrentThread.CurrentUICulture.Name == "mr-IN")
34.         {
35.             return 2;
36.         }
37.         else if (Thread.CurrentThread.CurrentUICulture.Name == "ar-SA")
38.         {
39.             return 3;
40.         }
41.         else
42.         {
43.             return 0;
44.         }
45.     }
46.     set
47.     {
48.
49.         if (value == 0)
50.         {
51.             Thread.CurrentThread.CurrentUICulture = new CultureInfo("en-GB");
52.         }
53.         else if (value == 1)
54.         {
```



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```

55.         Thread.CurrentThread.CurrentUICulture = new CultureInfo("hi-IN");
56.     }
57.     else if (value == 2)
58.     {
59.         Thread.CurrentThread.CurrentUICulture = new CultureInfo("ar-SA");
60.     }
61.     else
62.     {
63.         Thread.CurrentThread.CurrentUICulture = CultureInfo.InvariantCulture;
64.     }
65.     Thread.CurrentThread.CurrentCulture = Thread.CurrentThread.CurrentUICulture;
66. }
67. }
68. }
69. }
70. }
71. }
72. }
73. }
74. }
75. }

```

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After adding CultureHelper now we are moving to the Controller.

Adding Controller

In this part we will add 2 Controllers.

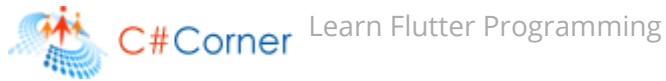
1. BaseController

We use BaseController in MVC that is inherited by all other controllers. In BaseController, we write common code that can be used in all the pages, for example by setting the language in the current thread for a multilingual site.

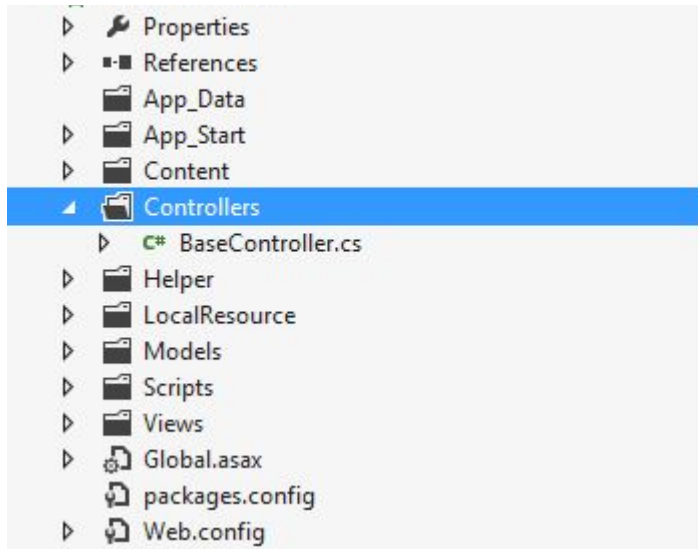
2. HomeController

This Controller will inherit BaseController.

To add a Controller just right-click on the Controller folder and select Add then inside that select Controller.



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Here is a code snippet of BaseController.

```
01. using System;
02. using System.Collections.Generic;
03. using System.Linq;
04. using System.Web;
05. using System.Web.Mvc;
06. using MvcLocalization.Helper;
07.
08. namespace MvcLocalization.Controllers
09. {
10.     public class BaseController : Controller
11.     {
12.         protected override void ExecuteCore()
13.         {
14.             int culture = 0;
```

```
15.         if (this.Session == null || this.Session["CurrentCulture"] == null)
16.         {
17.
```



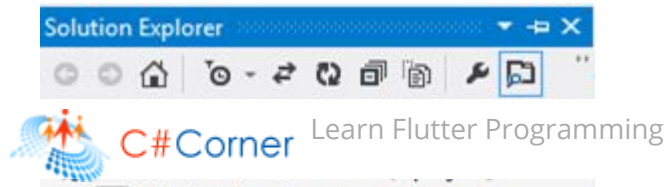
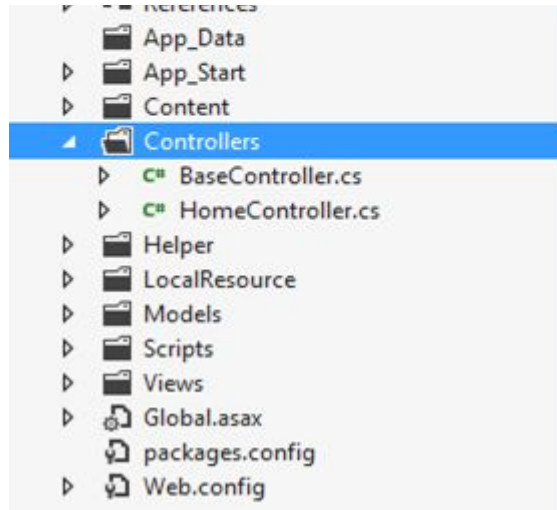
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```
22.         {
23.             culture = (int)this.Session["CurrentCulture"];
24.         }
25.         // calling CultureHelper class properties for setting
26.         CultureHelper.CurrentCulture = culture;
27.
28.         base.ExecuteCore();
29.     }
30.
31.     protected override bool DisableAsyncSupport
32.     {
33.         get { return true; }
34.     }
35.
36.     }
37. }
```

HomeController

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Here is a code snippet of HomeController.

```
01. using System;
02. using System.Collections.Generic;
03. using System.Linq;
04. using System.Web;
05. using System.Web.Mvc;
06. using MvcLocalization.Helper;
07. using MvcLocalization.Models;
08.
09. namespace MvcLocalization.Controllers
10. {
11.     public class HomeController : BaseController
12.     {
13.
14.         public ActionResult Index()
15.         {
```

```
16.         return View(new Userdetails());
17.     }
18.
```



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```
23.         //
24.         CultureHelper.CurrentCulture = id;
25.         //
26.         // Cache the new current culture into the user HTTP session.
27.         //
28.         Session["CurrentCulture"] = id;
29.         //
30.         // Redirect to the same page from where the request was made!
31.         //
32.         return Redirect(Request.UrlReferrer.ToString());
33.     }
34. }
35.
```

After this we will work on View.

We will first work on _LoginPartial.cshtml because we will add a link button on this page to display it on all pages of the website / application.

_LoginPartial.cshtml code snippet

```
01. @using System.Globalization
02. @using MvcLocalization
03. @using System.Threading;
04. @if (Request.IsAuthenticated)
05. {
06.     <p>
07.         Hello, @Html.ActionLink(User.Identity.Name, "ChangePassword", "Account",
08.             routeValues: null,
09.             htmlAttributes: new { @class = "username", title = "Change password" })!
10.
11.         @Html.ActionLink("Log off", "LogOff", "Account")
```

```

12.     </p>
13.   }
14.   else

```



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```

17.
20.     <li>@Html.ActionLink("Log in", "Login", "Account",
21.       routeValues: null, htmlAttributes: new { id = "loginLink" })</li>
22.   </ul>
23. }
24.
25. <ul style="margin-top:10px;">
26.   @{
27.     CultureInfo currentCulture = Thread.CurrentThread.CurrentCulture;
28.
29.     <li><a href="/Home/ChangeCurrentCulture/0">English</a></li>
30.
31.     <li><a href="/Home/ChangeCurrentCulture/1">Hindi</a></li>
32.
33.     <li><a href="/Home/ChangeCurrentCulture/2">Marathi</a></li>
34.
35.     <li><a href="/Home/ChangeCurrentCulture/3">Arabic</a></li>
36.   }
37. </ul>

```

Here is the link from where the user will be able to change his website Language.

As we have decided for what language we will use that code.

English :- 0 | Hindi:- 1 | Marathi :- 2 | Arabic :- 3



When the user clicks on this link it will call the **Home** Controller **ChangeCurrentCulture** Action result and it will pass an id to it.

According to that CultureHelper will get input and it will set the Culture for the page.

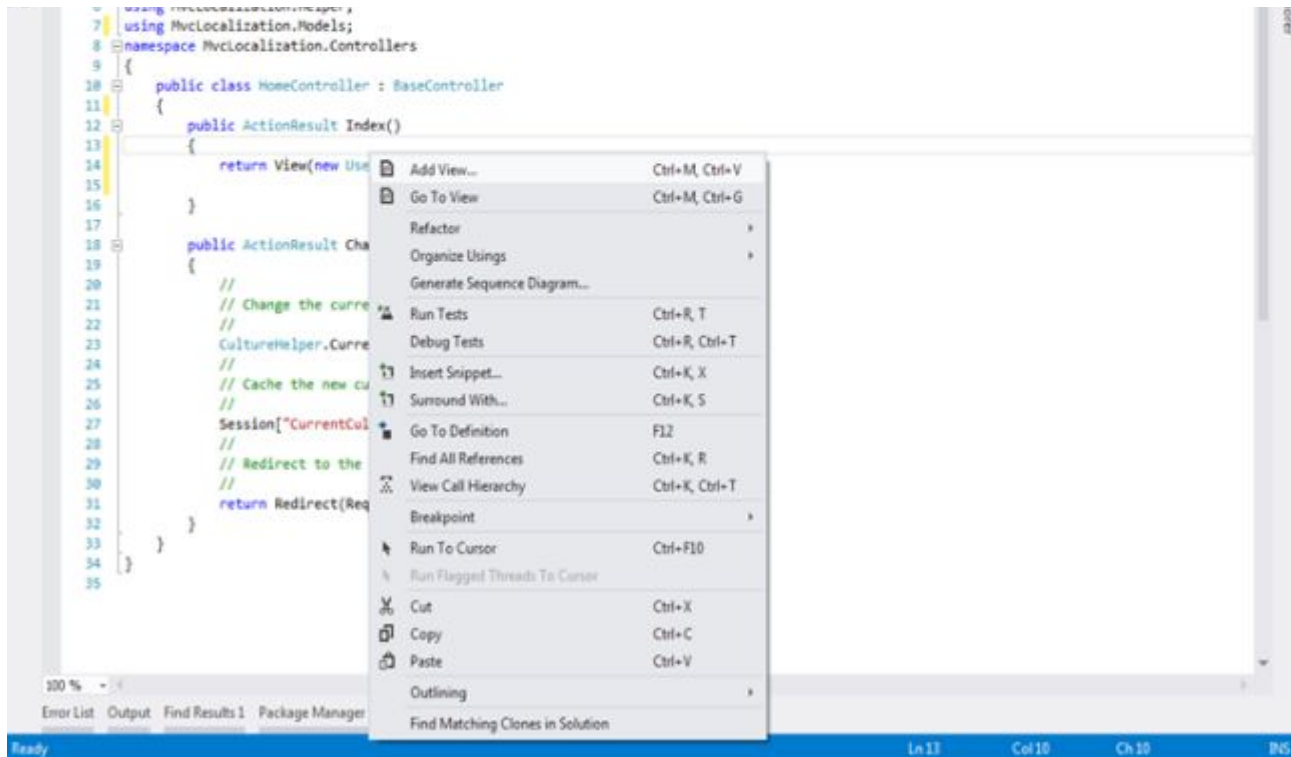
Adding View for HomeController

For adding a View just right-click anywhere inside HomeController and select Add View.



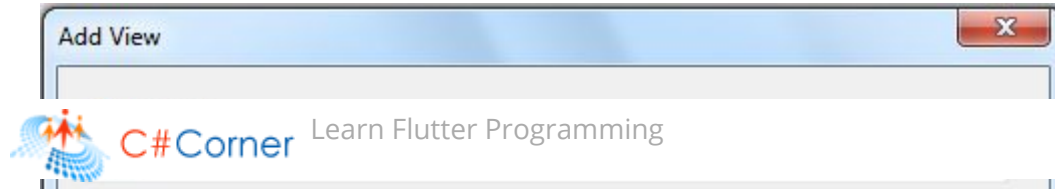
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After clicking Add View a new dialog will popup with the name Add View. Inside that you need to select:

- **View engine:** Razor.
- **Model Class:** Userdetails.
- **Scaffold template:** Create.
- **Use a layout or Master page:** Check this Property.

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☒ Create a strongly-typed view

Model class:
Userdetails (MvcLocalization.Models)

Scaffold template:
Create

☒ Reference script libraries

☐ Create as a partial view

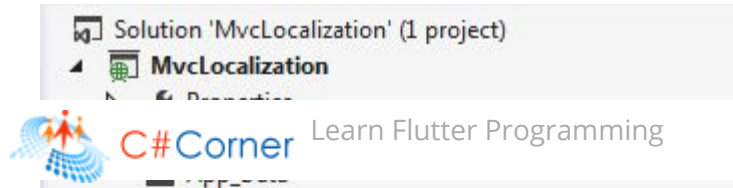
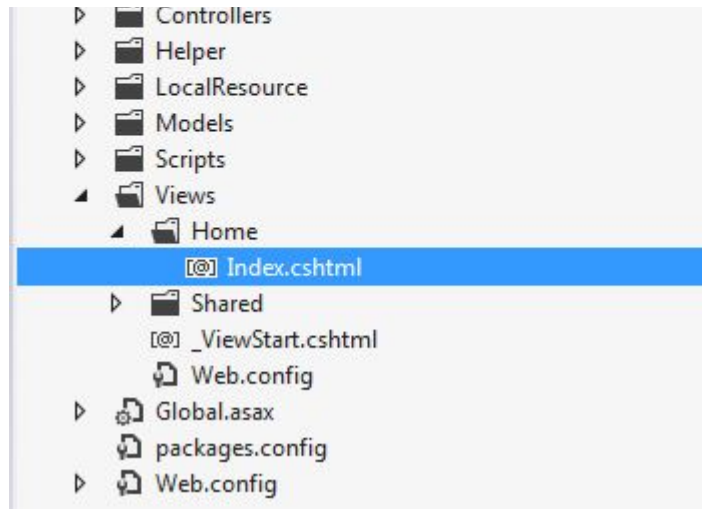
☒ Use a layout or master page:

(Leave empty if it is set in a Razor _viewstart file)

ContentPlaceHolder ID:
MainContent

Add Cancel

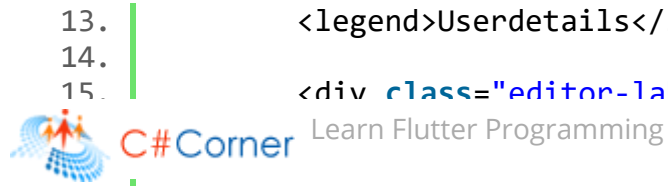
And click on the Add button.

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When adding a view using a Scaffold template all the code for the view will be generated.

Index.cshtml code snippet.

```
01. @model MvcLocalization.Models.Userdetails
02.
03. @{
04.     ViewBag.Title = "Index";
05. }
06.
07. <h2>Index</h2>
08.
09. @using (Html.BeginForm()) {
10.     @Html.ValidationSummary(true)
11.
12.     <fieldset>
```

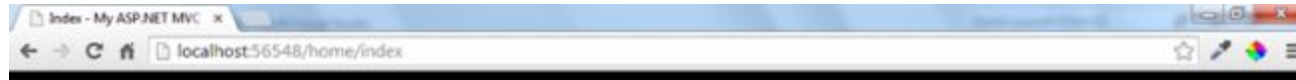


```
13.         <legend>Userdetails</legend>
14.
15.         <div class="editor-label">
16.             @Html.LabelFor(model => model.FirstName)
17.         </div>
18.
19.         @Html.ValidationMessageFor(model => model.FirstName)
20.     </div>
21.
22.
23.     <div class="editor-label">
24.         @Html.LabelFor(model => model.LastName)
25.     </div>
26.     <div class="editor-field">
27.         @Html.EditorFor(model => model.LastName)
28.         @Html.ValidationMessageFor(model => model.LastName)
29.     </div>
30.
31.     <p>
32.         <input type="submit" value="Create" />
33.     </p>
34. </fieldset>
35. }
36.
37. <div>
38.     @Html.ActionLink("Back to List", "Index")
39. </div>
40.
41. @section Scripts {
42.     @Scripts.Render("~/bundles/jqueryval")
43. }
```

Now we have completely configured the code. Now we just need to run the application and check it.

Complete view of page

It's taking the default culture, English, when it loads the first time.

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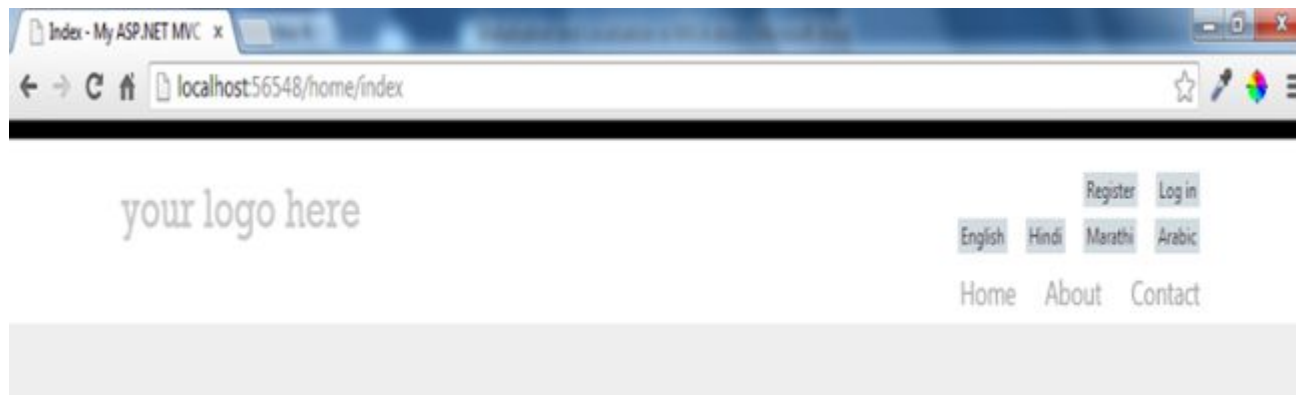
FirstName

LastName

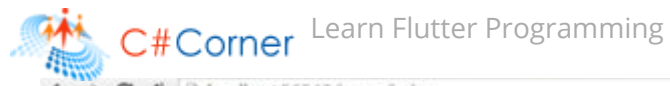
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Here is the link we added.



Let's check it by clicking on Hindi first:



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English Hindi Marathi Arabic
Home About Contact

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कल नाम

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Now to click on Marathi.

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And finally click on Arabic.

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Conclusion

Finally we have completed Globalization and Localization in ASP.NET MVC 4. I hope you have enjoyed it.

You can download this code from the preceding link.

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Globalization in ASP.NET

Localization in ASP.NET

MVC

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Indian Software Developer and Microsoft MVP from C# Corner MVP working on .Net Web Technology (Asp.net , C# , Sqlserver , MVC , Windows ,Console Application, javascript , jquery , json , ORM Dapper) and also... [Read more](#)

<http://dotnet-sai.blogspot.in>**70****17.5m****5****1**[View Previous Comments](#)**18****25**

Type your comment here and press Enter Key (Minimum 10 characters)



I have one question sir how to insert data other language ?

Krishna Parab**1783 111 1**

Sep 26, 2019

1 0 Reply

Ek no sir.

Krishna Parab**1783 111 1**

Sep 26, 2019

0 0



How to globalize the link 'Back to list' and menu like home,about,contact present on webpage

[Sukanya Joshi](#)

Apr 17, 2019



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THANK YOU SO MUCH SAINESHWAR ! I AM MAKING A DEV MANUAL ON HOW TO USE RESOURCES ON ASP.NET

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1858 36 0

0 0 Reply



How to add to the URL: lang = en or lang=ru ? like this: mysite.com/home/index&lang=en

[FIFA FIFA](#)

Oct 01, 2018

1884 10 0

0 0 Reply



Can you please tell me how to add country code in url like msdn?

[Tridip Bhattacharjee](#)

Nov 16, 2017

937 1.2k 34.6k

0 0 Reply



Great article Saineshwar ! i liked it. i tried it it's working fine ! but i want to ask something. can i use this with HTML labels ? i mean when lables are rendered through Razor like @Html.LabelFor() then conversion is working but not with the HTML lables like <label> </label> . how can i make it useable with HTML labels ?

[Nabil Nawaz](#)

Aug 01, 2017

1694 200 16.2k

0 0 Reply



I have some error in Arabic view , the date is showing in hijri date . How to solve pls help me.

[Rakesh Sasi](#)

May 03, 2017

1879 15 0

0 0 Reply



In each line in UserDetails: [Display(Name = "FirstName", ResourceType = typeof(Resource))], I get an error, underlining 'Resource - "the type or name 'Resource' could not be found. Are you missinga Using directive or an assembly reference?'

[david wier](#)

Feb 08, 2017

1890 4 0

0 0 Reply



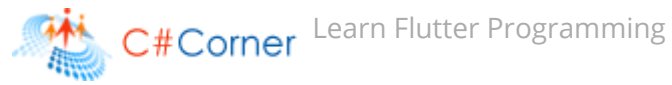
Hello, great post! I want to use the cache atributte on the index method but it doesnt take the parameter "Accept-Language" on the VaryByHeader, this is my code:[OutputCache(Duration = 360, VaryByHeader ="Accept-Language")]

[Adrián Rojas](#)

Jan 26, 2017

1892 2 0

0 0 Reply



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