(T20)討論 Validation(驗證)、ResourceFile、WebConfigString、EmailFormatValidation(Email 格式驗證)、EmailNotRegisteredValidation(驗證 Email 還沒被註冊)、JqueryUiDatePicker
CourseGUID: 8503b39c-5887-4634-8291-facfb3117924
==

(T20)討論 Validation(驗證)、ResourceFile、WebConfigString、EmailFormatValidation(Email 格式驗證)、EmailNotRegisteredValidation(驗證 Email 還沒被註冊)、JqueryUiDatePicker
(T20-1)討論 Validation(驗證)、ResourceFile (1. to 2.8.)
(T20-2)討論 Validation(驗證) (2.9.)
(T20-3)討論 StringLength、RegularExpression、Required、EnableValidation、EnableValidationSummar (2.10. to 2.11.)
(T20-4)討論 DisplayFormat、DateTimeformat (2.12.)
(T20-5)討論 Range、DateRange、BetweenMinimumDateAndToday、BeforeToday、DisplayFormat、DateTimeformat (3.)
(T20-6)討論 RegularExpression、EmailFormatValidation(Email 格式驗證) (4.1. to 4.2.)
(T20-7)討論 Compare、Remote、RemoteClientServer、EmailNotRegisteredValidation(驗證 Email 還沒被註冊) (4.3. to 4.5.)
==

==

0. Summary

==

In this tutorial, we will discuss

* Resource file
* Unobtrusive JavaScript is a js file which separated from the main html markup.
* 2 Ways to store date format string
  * In the public const variable
    * private const string DateFormat = "dd/MM/yyyy";
    * You may apply this const variable in validation attributes in Model class.
  * In Web.config
    * private static string DateFormat = System.Configuration.ConfigurationManager.AppSettings["DateDormat"];
    * You may NOT apply this web config key variable in validation attributes in Model class.
* StringLength
  * [StringLength(20, MinimumLength = 2)]
* RegularExpression

Reference:

  * https://docs.microsoft.com/en-us/dotnet/standard/base-types/regular-expression-language-quick-reference
  * https://regexr.com/
  * [RegularExpression(@"^(([A-za-z]+[\s]{1}[A-za-z]+)|([A-Za-z]+))$")] //First Name Last Name
  * [RegularExpression(@"^[\w-\._\+%]+@(?:[\w-]+\.)+[\w]{2,6}$", ErrorMessage = "Email is not valid")] //EmailAddress Regular Expression
* Range
  * [Range(1, 1000000)]
  * [Range(typeof(DateTime), "1/1/1970", "1/1/2001", ErrorMessage = "Date is out of Range")]   //Error - Client Side validation will never pass
* CustomizeValidationAttribute
  * [DateRange("01/01/1970", "01/01/2001")]
  * [BetweenMinimumDateAndToday("01/01/1970")]
  * [BeforeToday]
* Validate Date
  * In the Web Config
    * <globalization culture="en-au" uiCulture="en-AU" />
  * In the WebShare/WebShareConst.cs
    * public const string DateFormat = "dd/MM/yyyy";
    * public const string DateStringFormat = "{0:dd/MM/yyyy}";
  * In the Model Class
    * [DisplayFormat(DataFormatString = "{0:dd/MM/yyyy}", ApplyFormatInEditMode = true)]
    * [DisplayFormat(DataFormatString = WebShareConst.DateStringFormat, ApplyFormatInEditMode = true)]
* jquery ui datepicker

手殘驅魔人之 Validation 驗證。String 解放地之 ResourceFile 和 WebConfigString。無招勝有招的 RegularExpression，又見 Jquery Ui DatePicker

* Bad Data(不良數據)常常是將資料庫毀壞的兇手。
* Bad Data(不良數據)通常來自使用者的手殘。
* 所以我們需要「手殘驅魔人 」Validation 驗證，讓使用者可以防呆，避免 Bad Data(不良數據)進入資料庫。
* 詳細解說 String 該放在 ResourceFile 還是 WebConfigString。
* 詳細解說「無招勝有招」的 RegularExpression。
* 又見 Jquery UI DatePicker。
* 關於 NameProperty，StringLength，RegularExpression，Required，EnableValidation，EnableValidationSummary。
* 關於 DisplayFormat，DateTimeformat。
* 關於 Range，DateRange，BetweenMinimumDateAndToday，BeforeToday，DisplayFormat，DateTimeformat。
* 驗證 Email，關於 RegularExpression。

* 驗證 Email，確認 Email，關於 Compare，Remote，RemoteClientServer。
* 修改 Site.css

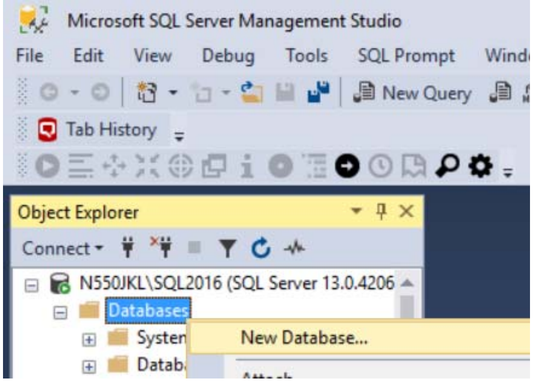
Reference:
* ASP.NET MVC 3: Integrating with the jQuery UI date picker and adding a jQuery validate date range validator
   * https://blogs.msdn.microsoft.com/stuartleeks/2011/01/25/asp-net-mvc-3-integrating-with-the-jquery-ui-date-picker-and-adding-a-jquery-validate-date-range-validator/
* One place to save date format dd/mm/yyyy
   * https://stackoverflow.com/questions/30255539/using-constant-for-defining-property-format-in-mvc
   * https://stackoverflow.com/questions/15880443/creating-a-string-in-a-web-config-and-use-it-in-a-web-api
* Jquery Validation fix for date format dd/mm/yyyy in Chrome and Safari
   * https://stackoverflow.com/questions/6906725/unobtrusive-validation-in-chrome-wont-validate-with-dd-mm-yyyy
   * http://devdens.blogspot.com.au/2011/11/jquery-validation-fix-for-date-format_29.html
   * https://github.com/globalizejs/globalize#readme
   * https://www.nuget.org/packages/jquery-globalize/1.3.0
   * https://stackoverflow.com/questions/6906725/unobtrusive-validation-in-chrome-wont-validate-with-dd-mm-yyyy
   * https://stackoverflow.com/questions/14020117/dd-mm-yyyy-date-validation-error-with-google-chrome
* Remote Validation in mvc affected Edit
   * https://forums.asp.net/t/2131813.aspx?Remote+Validation+in+mvc+affected+Edit
* Regular expression
   * https://regexr.com/
   * https://docs.microsoft.com/en-us/dotnet/standard/base-types/regular-expression-language-quick-reference
* Range with Date issue
   * https://blogs.msdn.microsoft.com/stuartleeks/2011/01/25/asp-net-mvc-3-integrating-with-the-jquery-ui-date-picker-and-adding-a-jquery-validate-date-range-validator/
   * https://forums.asp.net/t/1831436.aspx?Validating+a+datetime+range+in+EF+annotation
   * https://stackoverflow.com/questions/17321948/is-there-a-rangeattribute-for-datetime
   * https://archive.codeplex.com/?p=foolproof
   * https://stackoverflow.com/questions/13183647/date-range-validation-with-entity-framework-4-data-annotations
==

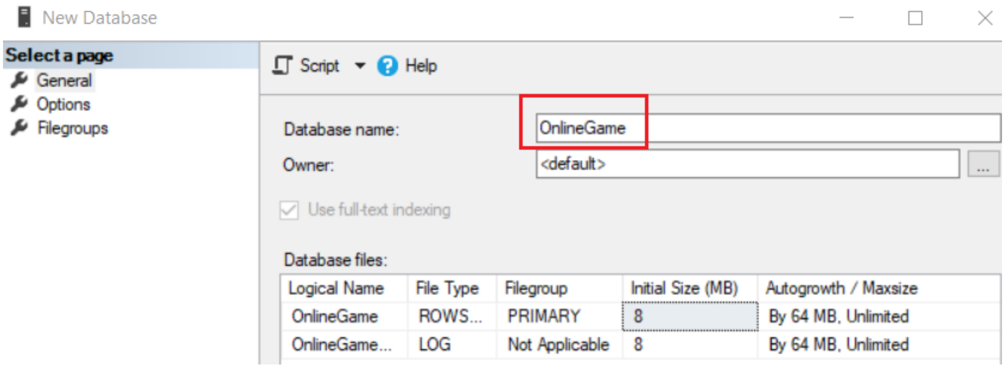
更正 1:
Tutorial 20-03 的影片
時間在 12:03
在介紹 RegularExpression 時提到
ErrorMessage 不要放在 ResoureFile 裡,
而是要放在 Global Variable。
這邊我講的不夠精確
其實你可以這樣寫的
[RegularExpression(@"^[0-9][0-9]?$|^100$", ErrorMessageResourceName = "IntPositive", ErrorMessageResourceType = typeof(Resource))]
或是你也可以參考這邊這樣寫
https://stackoverflow.com/questions/2523579/how-to-use-regularexpression-dataannotation-with-resource-file
另外
黑暗執行緒有一篇文章是教人如何在 excel 裡維護多國語系，再生成資源檔，還不錯。也可以參考

1. OnlineGame DB

1.1. TSQL

In SQL server Management Studio (SSMS)
Database --> Right Click --> New Database -->
In General Tab -->
Name: OnlineGame
In options Tab --> Recovery model : Simple





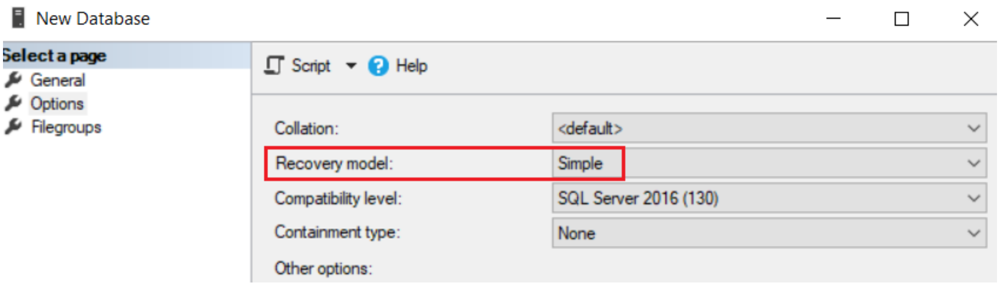
Database name: OnlineGame

Owner: <default>

☑ Use full-text indexing

Database files:

Logical Name	File Type	Filegroup	Initial Size (MB)	Autogrowth / Maxsize
OnlineGame	ROWS...	PRIMARY	8	By 64 MB, Unlimited
OnlineGame...	LOG	Not Applicable	8	By 64 MB, Unlimited



Collation: <default>

Recovery model: Simple

Compatibility level: SQL Server 2016 (130)

Containment type: None

Other options:

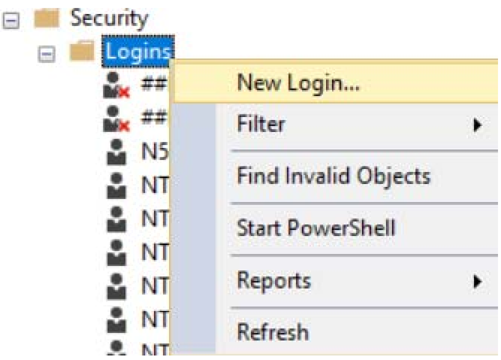
```
--1. Drop if it exists
--Drop Table if it exists.
IF ( EXISTS ( SELECT    *
              FROM      INFORMATION_SCHEMA.TABLES
              WHERE     TABLE_NAME = 'Gamer' ) )
    BEGIN
        TRUNCATE TABLE Gamer;
        DROP TABLE Gamer;
    END;
GO -- Run the previous command and begins new batch
IF ( EXISTS ( SELECT    *
              FROM      INFORMATION_SCHEMA.TABLES
              WHERE     TABLE_NAME = 'Team' ) )
    BEGIN
        TRUNCATE TABLE Team;
        DROP TABLE Team;
    END;
GO -- Run the previous command and begins new batch
--2. Create Table
CREATE TABLE Team
    (
      Id INT PRIMARY KEY
            IDENTITY(1, 1)
            NOT NULL ,
      [Name] NVARCHAR(100) NOT NULL
    );
GO -- Run the previous command and begins new batch
CREATE TABLE Gamer
    (
      Id INT PRIMARY KEY
            IDENTITY(1, 1)
            NOT NULL ,
      [Name] NVARCHAR(100) NOT NULL ,
      Gender NVARCHAR(10) NOT NULL ,
      City NVARCHAR(50) NOT NULL ,
      DateOfBirth DATETIME NOT NULL ,
      EmailAddress NVARCHAR(100) NOT NULL,
      Score INT NOT NULL,
      ProfileUrl NVARCHAR(100) ,
      GameMoney INT NOT NULL,
      RolePhoto NVARCHAR(100) ,
      RolePhotoAltText NVARCHAR(100) ,
      TeamId INT FOREIGN KEY REFERENCES Team ( Id ) NOT NULL
    );
GO -- Run the previous command and begins new batch
--3. Insert Data
INSERT  Team
VALUES  ( N'TeamOne' );
INSERT  Team
VALUES  ( N'TeamTwo' );
INSERT  Team
VALUES  ( N'TeamThree' );
GO -- Run the previous command and begins new batch
INSERT  Gamer
VALUES  ( N'NameOne ABB', N'Male', N'City01', '1979/4/28', '1@AAA.com', 3500,
          'https://ithandyguytutorial.blogspot.com.au/', 1000,
          '~/Photos/Name01.png', 'Name01RolePhoto', 1 );
INSERT  Gamer
VALUES  ( N'NameTwo CDDE', N'Female', N'City03', '1981/7/24', '2@BBB.com', 3500,
          'https://ithandyguytutorial.blogspot.com.au/', 1500,
          '~/Photos/Name02.png', 'Name02RolePhoto', 2 );
INSERT  Gamer
VALUES  ( N'NameThree FIJK', N'Female', N'City01', '1984/12/5', '3@CCCC.com',
           3500, 'https://ithandyguytutorial.blogspot.com.au/', 4000,
          '~/Photos/Name03.png', 'Name03RolePhoto', 3 );
INSERT  Gamer
```

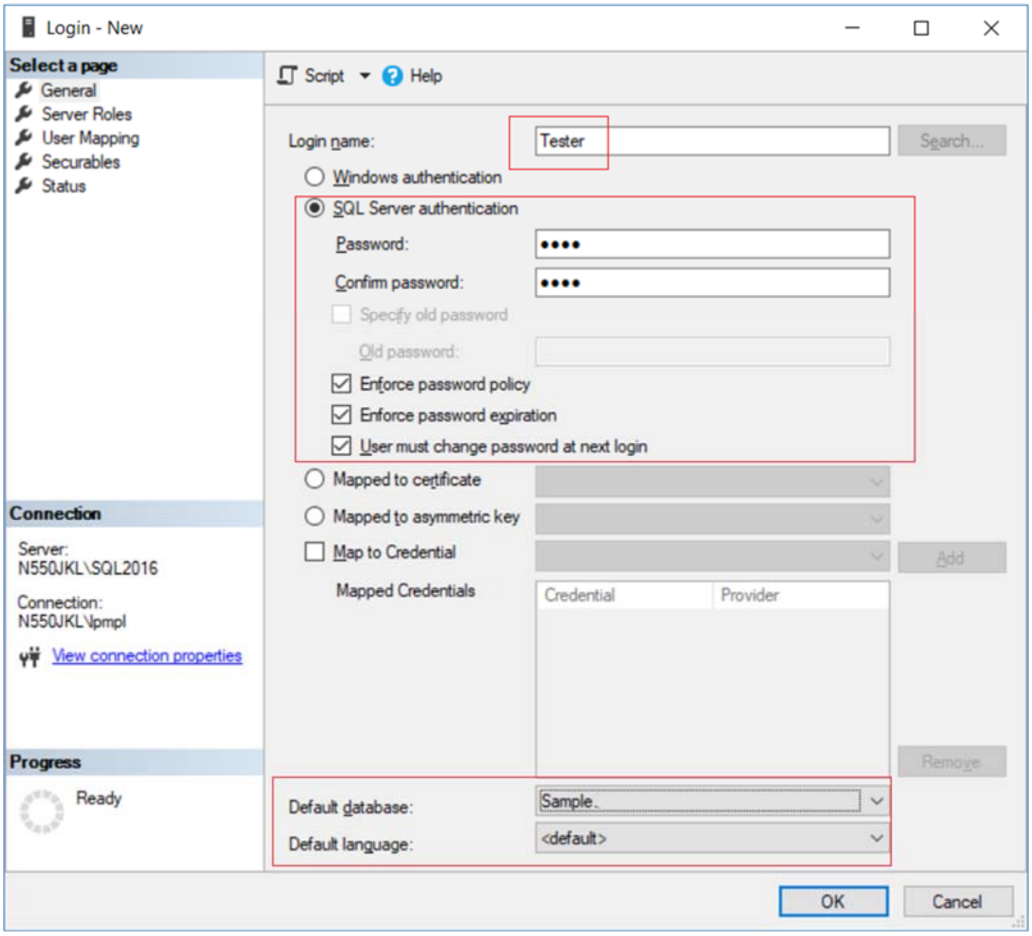
```
VALUES  ( N'NameFour LMOPPQ', N'Male', N'City02', '1983/5/29', '4@DD.com', 3500,
          'https://ithandyguytutorial.blogspot.com.au/', 2500,
          '~/Photos/Name04.png', 'Name04RolePhoto', 1 );
INSERT  Gamer
VALUES  ( N'NameFive QRSTT', N'Male', N'City01', '1979/6/20', '5@EEE.com', 3500,
          'https://ithandyguytutorial.blogspot.com.au/', 3500,
          '~/Photos/Name05.png', 'Name05RolePhoto', 3 );
INSERT  Gamer
VALUES  ( N'NameSix TUVVX', N'Female', N'City03', '1984/5/15', '6@FF.com', 3500,
          'https://ithandyguytutorial.blogspot.com.au/', 2500,
          '~/Photos/Name06.png', 'Name06RolePhoto', 3 );
INSERT  Gamer
VALUES  ( N'NameSeven XYZZXX', N'Female', N'City01', '1986/4/29', '7@GGGG.com',
          3500, 'https://ithandyguytutorial.blogspot.com.au/', 4550,
          '~/Photos/Name07.png', 'Name07RolePhoto', 2 );
INSERT  Gamer
VALUES  ( N'NameEight ABBCDE', N'Male', N'City02', '1985/7/28', '8@HH.com', 3500,
          'https://ithandyguytutorial.blogspot.com.au/', 3550,
          '~/Photos/Name08.png', 'Name08RolePhoto', 1 );
INSERT  Gamer
VALUES  ( N'NameNine QRSTTUVXX', N'Male', N'City02', '1983/4/16', '9@IIII.com',
          3500, 'https://ithandyguytutorial.blogspot.com.au/', 2510,
          '~/Photos/Name09.png', 'Name09RolePhoto', 1 );
GO -- Run the previous command and begins new batch
```

1.2. Security login

In SQL server

Object Explorer --> Security --> Logins --> New Logins
-->
General Tab
Login Name :
Tester
Password:
1234
Default Database:
OnlineGame
-->
Server Roles Tab
Select
sysadmin
-->
User Mapping Tab
Select **OnlineGame**
Select every single role.





Login name: Tester

○ Windows authentication

● SQL Server authentication

Password: ••••

Confirm password: ••••

□ Specify old password

Old password:

☑ Enforce password policy

☑ Enforce password expiration

☑ User must change password at next login

○ Mapped to certificate

○ Mapped to asymmetric key

□ Map to Credential

Mapped Credentials

Credential	Provider

Default database: Sample

Default language: <default>

Connection

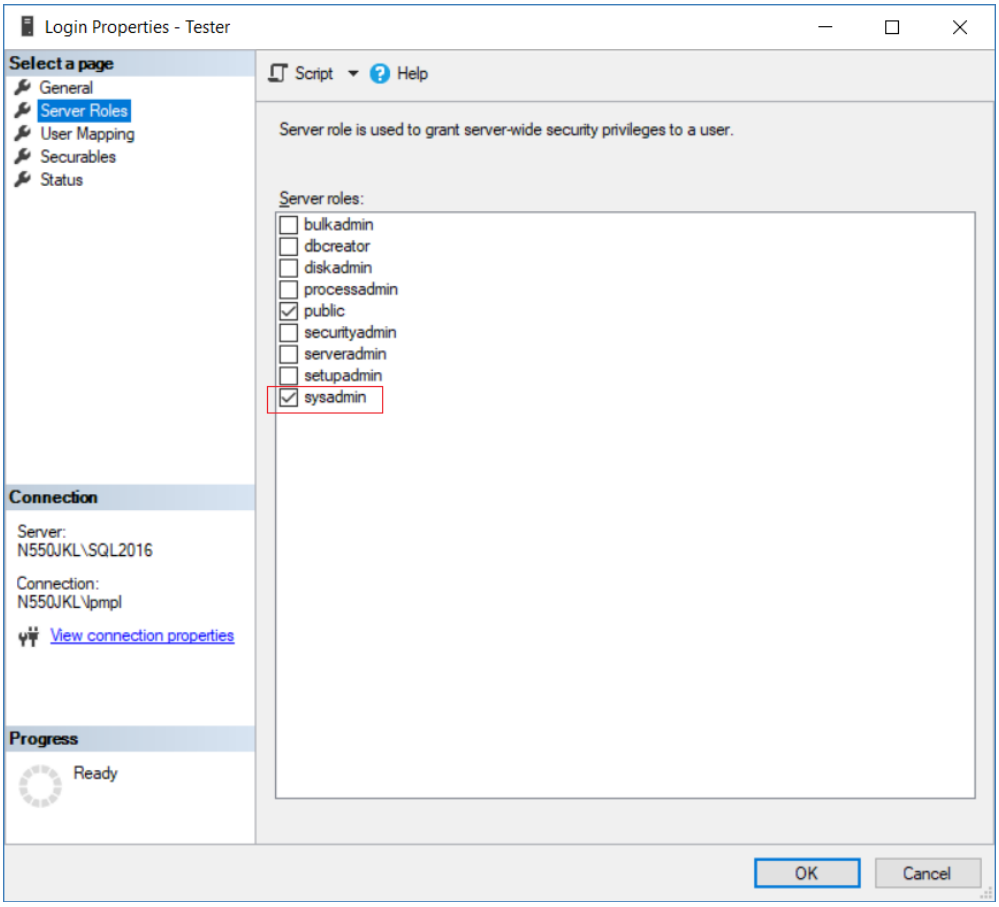
Server:
N550JKL\SQL2016

Connection:
N550JKL\lpmpl

View connection properties

Progress

Ready



Server role is used to grant server-wide security privileges to a user.

Server roles:

- □ bulkadmin
- □ dbcreator
- □ diskadmin
- □ processadmin
- ☑ public
- □ securityadmin
- □ serveradmin
- □ setupadmin
- ☑ sysadmin

Connection

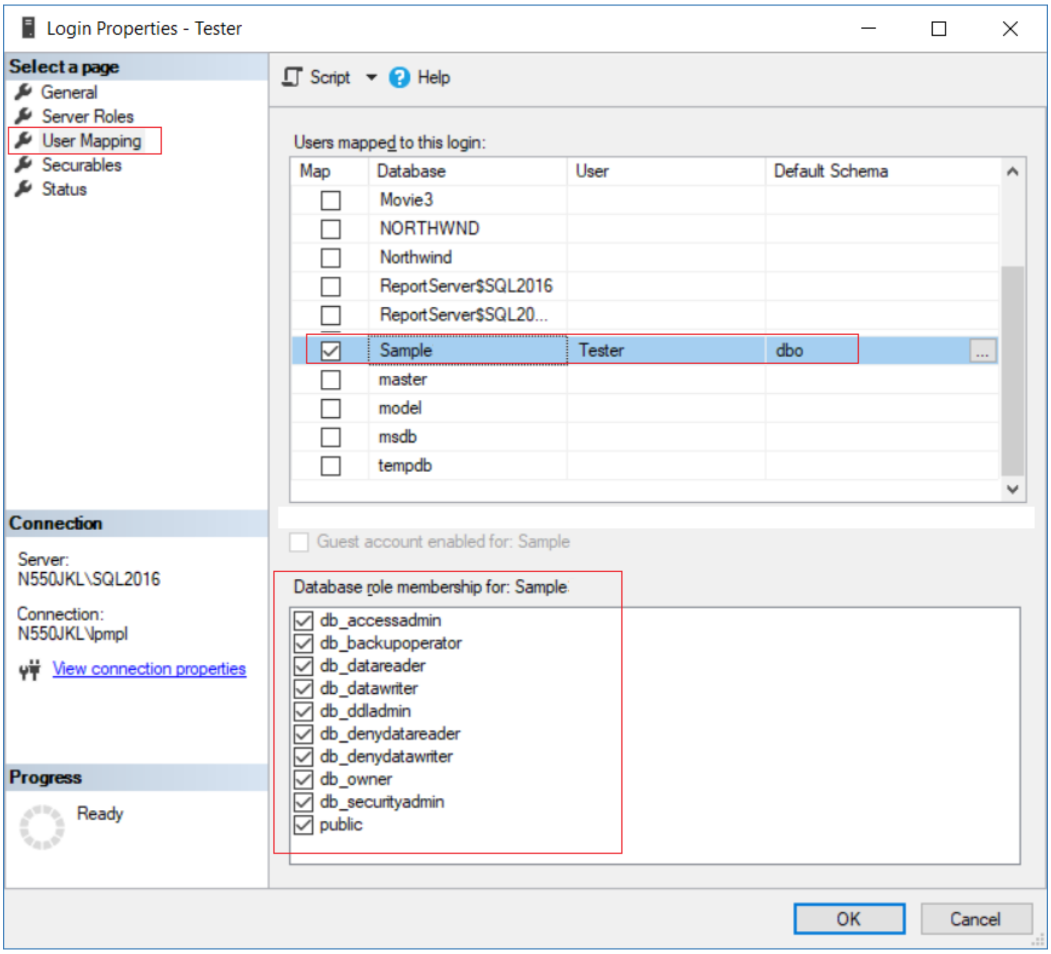
Server:
N550JKL\SQL2016

Connection:
N550JKL\lpmpl

View connection properties

Progress

Ready



Users mapped to this login:

Map	Database	User	Default Schema
□	Movie3		
□	NORTHWND		
□	Northwind		
□	ReportServer$SQL2016		
□	ReportServer$SQL20...		
☑	Sample	Tester	dbo
□	master		
□	model		
□	msdb		
□	tempdb		

□ Guest account enabled for: Sample

Database role membership for: Sample

- ☑ db_accessadmin
- ☑ db_backupoperator
- ☑ db_datareader
- ☑ db_datawriter
- ☑ db_ddladmin
- ☑ db_denydatareader
- ☑ db_denydatawriter
- ☑ db_owner
- ☑ db_securityadmin
- ☑ public

Connection

Server:
N550JKL\SQL2016

Connection:
N550JKL\lpmpl

View connection properties

Progress

Ready

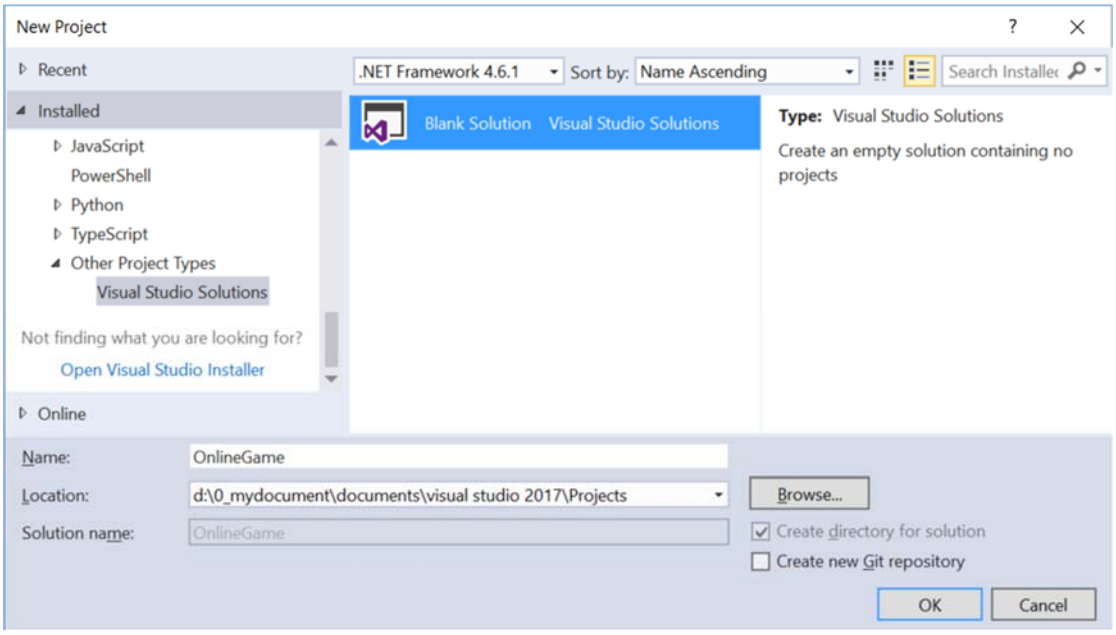
2. OnlineGame Solution

2.1. OnlineGame Solution

File --> New --> Project... -->

Other Project Types --> Visual Studio Solutions --> Blank Solution
-->

Name: **OnlineGame**



.NET Framework 4.6.1 Sort by: Name Ascending

Type: Visual Studio Solutions

Create an empty solution containing no projects

Name: OnlineGame

Location: d:\0_mydocument\documents\visual studio 2017\Projects

Solution name: OnlineGame

☑ Create directory for solution

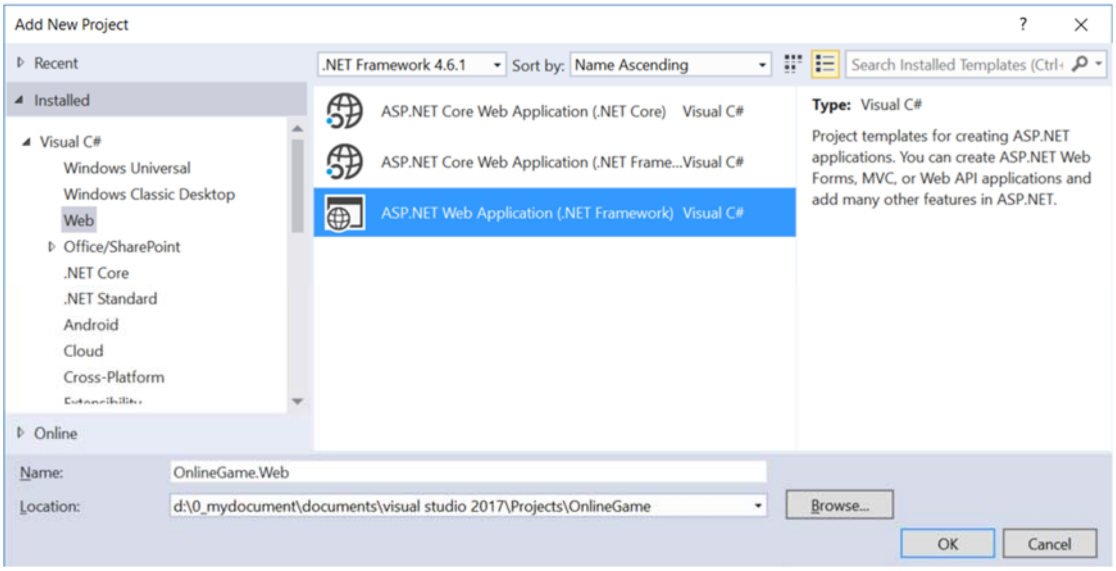
□ Create new Git repository

2.2. OnlineGame.Web

Solutions Name --> Add --> New Project -->

Visual C# --> Web --> ASP.NETWeb Application (.Net Framework)
-->

Name: **OnlineGame.Web**
Empty --> Select "MVC" --> OK



Add New Project

▷ Recent

◢ Installed

◢ Visual C#
- Windows Universal
- Windows Classic Desktop
- Web
- ▷ Office/SharePoint
- .NET Core
- .NET Standard
- Android
- Cloud
- Cross-Platform

▷ Online

.NET Framework 4.6.1 · Sort by: Name Ascending · Search Installed Templates (Ctrl+

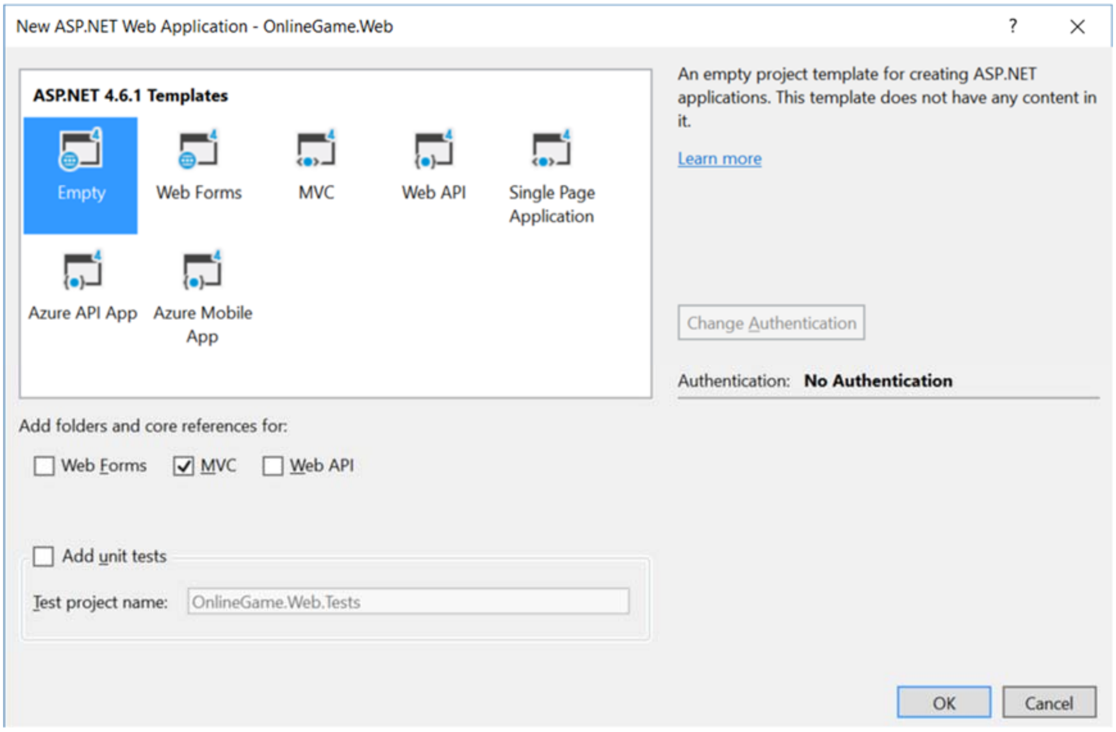
- ASP.NET Core Web Application (.NET Core) Visual C#
- ASP.NET Core Web Application (.NET Frame... Visual C#
- ASP.NET Web Application (.NET Framework) Visual C#

Type: Visual C#

Project templates for creating ASP.NET applications. You can create ASP.NET Web Forms, MVC, or Web API applications and add many other features in ASP.NET.

Name: OnlineGame.Web

Location: d:\0_mydocument\documents\visual studio 2017\Projects\OnlineGame



New ASP.NET Web Application - OnlineGame.Web

ASP.NET 4.6.1 Templates

- Empty
- Web Forms
- MVC
- Web API
- Single Page Application
- Azure API App
- Azure Mobile App

An empty project template for creating ASP.NET applications. This template does not have any content in it.

Learn more

Change Authentication

Authentication: **No Authentication**

Add folders and core references for:

□ Web Forms ☑ MVC □ Web API

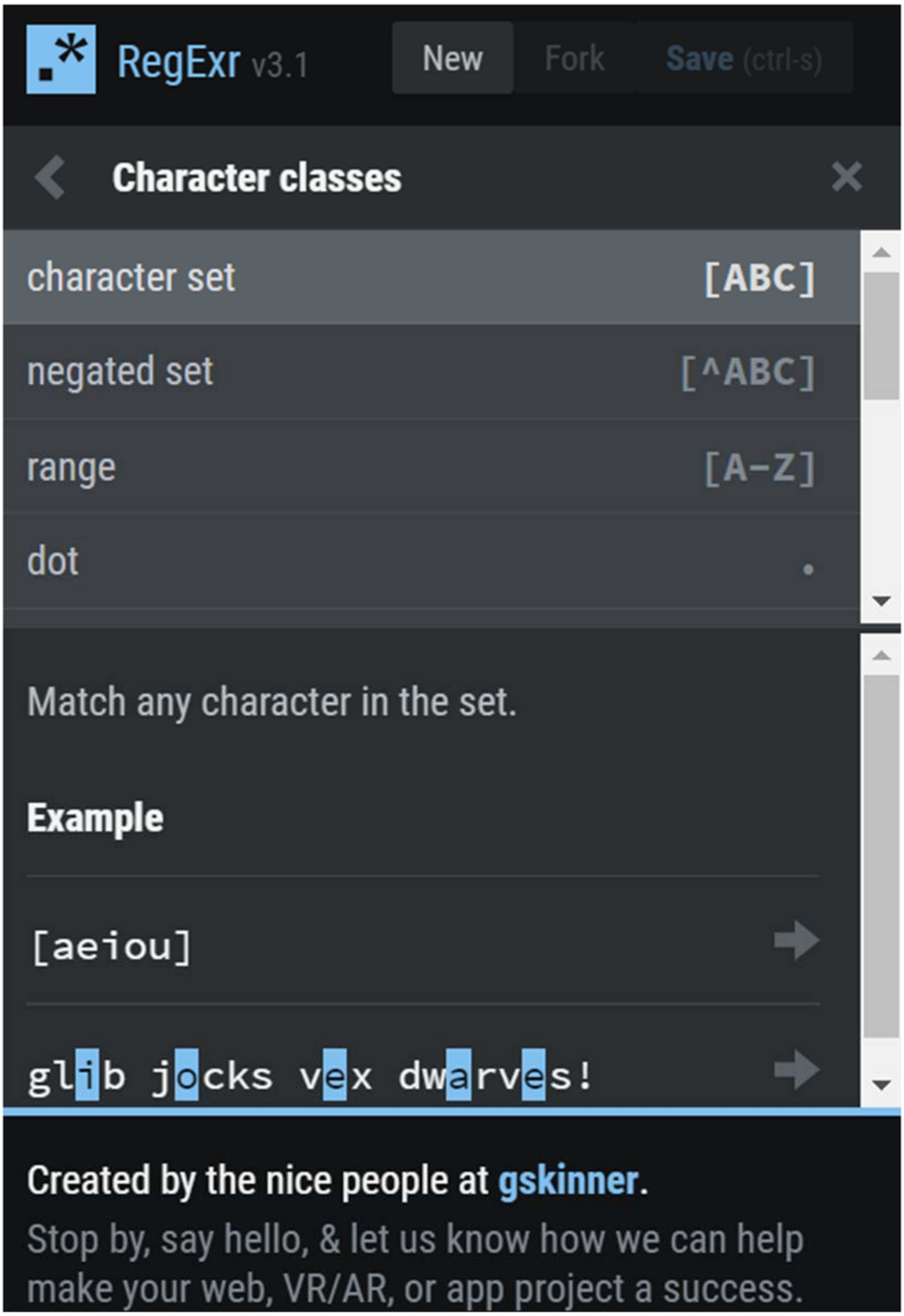
□ Add unit tests

Test project name: OnlineGame.Web.Tests

2.3. Regular expression

Reference:
https://docs.microsoft.com/en-us/dotnet/standard/base-types/regular-expression-language-quick-reference
https://regexr.com/

Go to
https://regexr.com/
Click "Reference" --> Click "Character classes"
Click all of examples and have a look.



Character classes

character set	[ABC]
negated set	[^ABC]
range	[A-Z]
dot	.

Match any character in the set.

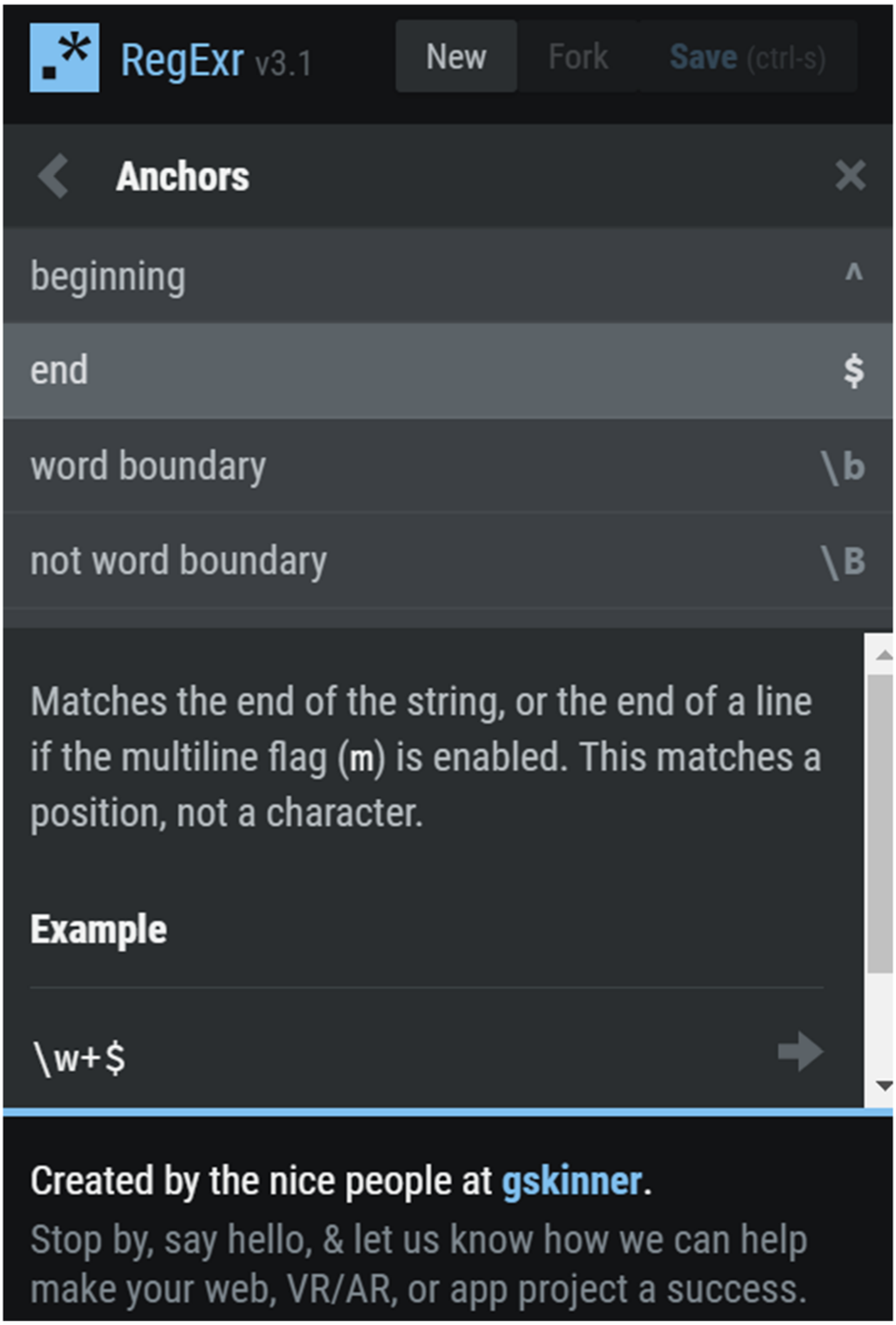
Example

```
[aeiou]
```

```
glib jocks vex dwarves!
```

Created by the nice people at gskinner.
Stop by, say hello, & let us know how we can help make your web, VR/AR, or app project a success.

Go to
https://regexr.com/
Click "**Reference**" --> Click "**Anchors**"
Click all of examples.



Matches the end of the string, or the end of a line if the multiline flag (**m**) is enabled. This matches a position, not a character.

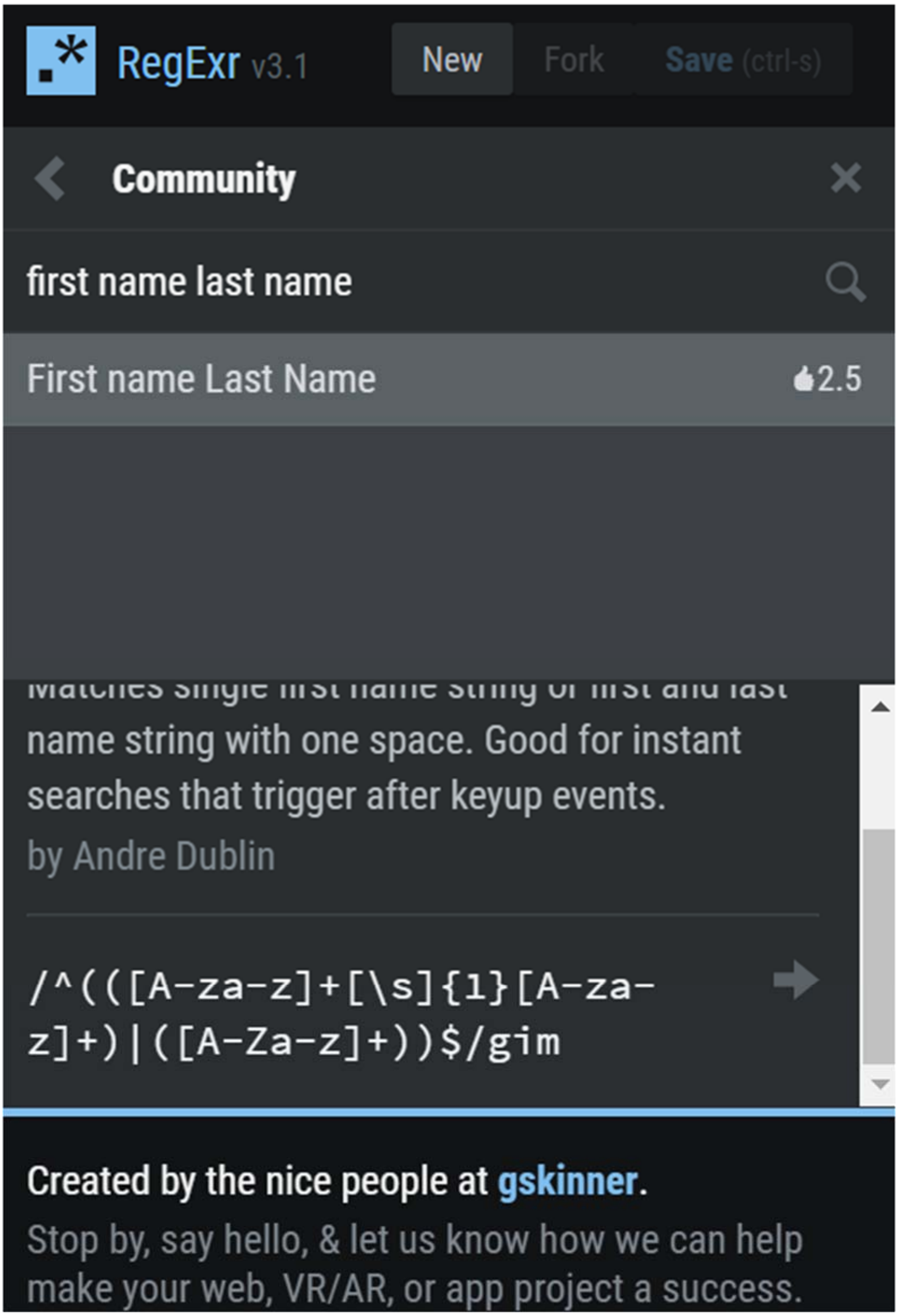
Example

```
\w+$
```

Created by the nice people at gskinner.
Stop by, say hello, & let us know how we can help make your web, VR/AR, or app project a success.

If you don't understand any of the regular expression,
then at least you have to learn how to use it.

Go to
https://regexr.com/
Click "**Community**" --> Search "**First Name, Last Name**"
^(([A-za-z]+[\s]{1}[A-za-z]+)|([A-Za-z]+))$
Matches single first name string or first and last name string with one space.
Good for instant searches that trigger after keyup events.



Matches single first name string or first and last name string with one space. Good for instant searches that trigger after keyup events.

by Andre Dublin

```
/^(([A-za-z]+[\s]{1}[A-za-z]+)|([A-Za-z]+))$/gim
```

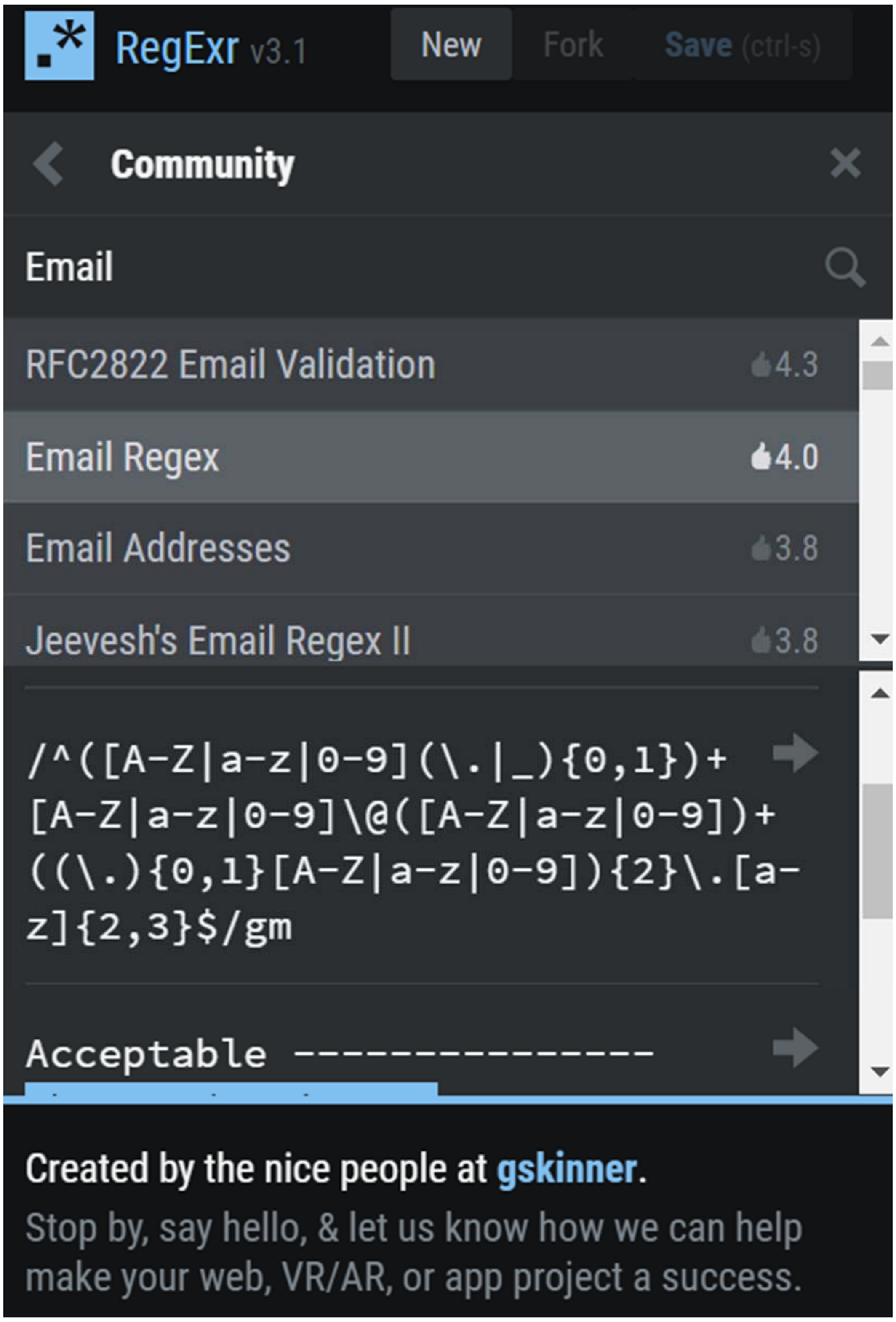
Created by the nice people at gskinner.

Stop by, say hello, & let us know how we can help make your web, VR/AR, or app project a success.

Go to
https://regexr.com/
Click "**Community**" --> Search "**Email**"
^(([A-za-z]+[\s]{1}[A-za-z]+)|([A-Za-z]+))$

Acceptable
abc1.1@domain.com
abc.abc@domain.com
abc_41.15768@domain.com
12345@domain.com

12.12.23@domain.com
ABC.ABC.ABC.ABC0046@domain.com



```
/^([A-Z|a-z|0-9](\.|_){0,1})+[A-Z|a-z|0-9]\@([A-Z|a-z|0-9])+((\.){0,1}[A-Z|a-z|0-9]){2}\.[a-z]{2,3}$/gm
```

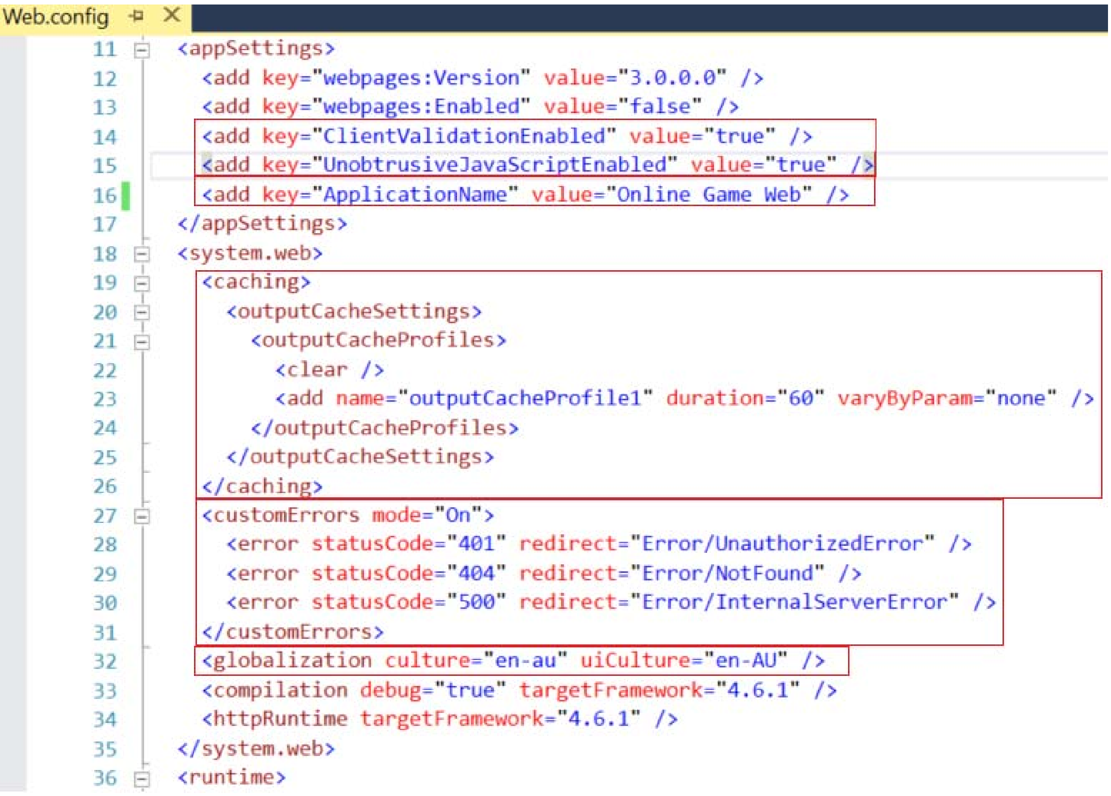
```
Acceptable ---------------
```

Created by the nice people at gskinner.

Stop by, say hello, & let us know how we can help make your web, VR/AR, or app project a success.

2.4. Web.config

2.4.1. Web.config



```
<appSettings>
  <add key="webpages:Version" value="3.0.0.0" />
  <add key="webpages:Enabled" value="false" />
  <add key="ClientValidationEnabled" value="true" />
  <add key="UnobtrusiveJavaScriptEnabled" value="true" />
  <add key="ApplicationName" value="Online Game Web" />
</appSettings>
<system.web>
  <caching>
    <outputCacheSettings>
      <outputCacheProfiles>
        <clear />
        <add name="outputCacheProfile1" duration="60" varyByParam="none" />
      </outputCacheProfiles>
    </outputCacheSettings>
  </caching>
  <customErrors mode="On">
    <error statusCode="401" redirect="Error/UnauthorizedError" />
    <error statusCode="404" redirect="Error/NotFound" />
    <error statusCode="500" redirect="Error/InternalServerError" />
  </customErrors>
  <globalization culture="en-au" uiCulture="en-AU" />
  <compilation debug="true" targetFramework="4.6.1" />
  <httpRuntime targetFramework="4.6.1" />
</system.web>
<runtime>
```

```
<appSettings>
  <add key="webpages:Version" value="3.0.0.0" />
  <add key="webpages:Enabled" value="false" />
  <add key="ClientValidationEnabled" value="true" />
  <add key="UnobtrusiveJavaScriptEnabled" value="true" />
  <add key="ApplicationName" value="Online Game Web" />
</appSettings>
<system.web>
  <caching>
    <outputCacheSettings>
      <outputCacheProfiles>
        <clear />
        <add name="outputCacheProfile1" duration="60" varyByParam="none" />
      </outputCacheProfiles>
    </outputCacheSettings>
  </caching>
  <customErrors mode="On">
    <error statusCode="401" redirect="Error/UnauthorizedError" />
    <error statusCode="404" redirect="Error/NotFound" />
    <error statusCode="500" redirect="Error/InternalServerError" />
  </customErrors>
  <globalization culture="en-au" uiCulture="en-AU" />
  <compilation debug="true" targetFramework="4.6.1" />
  <httpRuntime targetFramework="4.6.1" />
</system.web>
```

2.4.2. The way to use key of Web.config in a class

```
private static string _applicationName
= System.Configuration.ConfigurationManager.AppSettings["ApplicationName"];
```

2.4.3. The way to use key of in view

```
@Html.ActionLink(System.Configuration.ConfigurationManager.AppSettings["ApplicationName"], "Index", "Gamer
", new { area = "" }, new { @class = "navbar-brand" })
```

2.5. WebShare/WebShareConst.cs

```
namespace OnlineGame.Web.WebShare
{
    public class WebShareConst
    {
        public const string DateFormat = "dd/MM/yyyy";
        public const string DateFormatJavascriptString = "dd/mm/yy";
        public const string DateStringFormat = "{0:dd/MM/yyyy}";
        //RegularExpression
        //https://regexr.com/
        public const string FirstNameLastNameRegularExpression = @"^(([A-za-z]+[\s]{1}[A-za-z]+)|([A-Za-
z]+))$";
        public const string EmailRegularExpression = @"^[\w-\._\+%]+@(?:[\w-]+\.)+[\w]{2,6}$";
        //Validation String
        public const string EmailNotValid = "Email is not valid";
        public const string FirstNameLastNameNotValid = "Please enter first name or first name and last
name.";
        public const string EmailHasBeenTaken = "The email has already been taken.";
        public const string ValidationSummaryTitleString = "Please check the following fields.";
    }
}
```

2.6. Global.asax.cs

```
using System.Web.Mvc;
using System.Web.Routing;
using OnlineGame.Web;
namespace OnlineGame.Web
{
    public class MvcApplication : System.Web.HttpApplication
    {
        //Application_Start() is the magic start point of this application
        protected void Application_Start()
        {
            AreaRegistration.RegisterAllAreas();
            //Register HandleErrorAttribute to global filter
            FilterConfig.RegisterGlobalFilters(GlobalFilters.Filters);
            //1.
            //Register Route Configure in RouteConfig.cs
            //If you want to see route configuration,
            //you may find it in RouteConfig.cs
            //2.
            //System.Web.Routing.RouteCollection Routes { get; }
            //Gets a collection of objects that derive from the System.Web.Routing.RouteBase class.
            RouteConfig.RegisterRoutes(RouteTable.Routes);
            ////Enable Unobtrusive validation
            //HtmlHelper.UnobtrusiveJavaScriptEnabled = true;
            //HtmlHelper.ClientValidationEnabled = true;
        }
    }
}
```

2.7. App_Start/RouteConfig.cs

```
using System.Web.Mvc;
using System.Web.Routing;
namespace OnlineGame.Web
{
    public class RouteConfig
    {
        public static void RegisterRoutes(RouteCollection routes)
        {
            //Handle the Route of the axd request file.
            //E.g. ASP.Net Tracing
            routes.IgnoreRoute("{resource}.axd/{*pathInfo}");
            //Handle the Route called "Default".
            //The mapping URL is "{controller}/{action}/{id}"
            //Set the default value of Controller, action, and id.
            routes.MapRoute(
                name: "Default",
                url: "{controller}/{action}/{id}",
                defaults: new { controller = "Gamer", action = "Index", id = UrlParameter.Optional }
            );
        }
    }
}
/*
1.
//routes.MapRoute(
//    name: "Default",
//    url: "{controller}/{action}/{id}",
//    defaults: new { controller = "Home", action = "Index", id = UrlParameter.Optional }
//);
1.1.
When a request comes in,
it's trying to do a pattern match based on
all the templates it sees in these mapped routes.
A route is some instructions for
how to take a URI coming into a request
and map it to some code,
normally a controller.
In this case,
look at defaults parameter,
when user request http://localhost:PortNumber/
IIS Express will run
HomeController Index action.
It will map to Controllers/HomeController.cs
and   map to Index Method
```

```
1.2.
By convention in MVC.
All controllers will have Controller suffix.
This suffix is not required in the URL.
So, if you want to invoke Home controller,
you specify /Home and not /HomeController.
-----------------------------------
2.
//routes.IgnoreRoute("{resource}.axd/{*pathInfo}");
2.1.
Reference:
https://stackoverflow.com/questions/9016650/what-is-routes-ignorerouteresource-axd-pathinfo
This line can handle the axd file request route,
E.g. trace.axd
.axd files don't exist physically.
ASP.NET uses URLs with .axd extensions
(ScriptResource.axd and WebResource.axd) internally,
and they are handled by an HttpHandler.
Therefore, you should keep this rule,
to prevent ASP.NET MVC from trying to handle the request
instead of letting the dedicated HttpHandler do it.
2.2.
trace.axd
Reference:
https://msdn.microsoft.com/en-us/library/wwh16c6c.aspx
trace.axd trace details for a specific request.
If you want to enable trace.axd,
then you have to go to Web.config
Add <trace enabled="true" pageOutput="false"/> under <system.web>
Then run the project, type the following URL
http://localhost/OnlineGame.Web/trace.axd
This will return ASP.NET trace, trace.axd.
If you do not have
// routes.IgnoreRoute("{resource}.axd/{*pathInfo}");
then you can not enable the trace.axd.
*/
```

2.8. Error Handling

2.8.1. Web.config

Check the following code in Web.config

```
<customErrors mode="On">
  <error statusCode="401" redirect="Error/UnauthorizedError" />
  <error statusCode="404" redirect="Error/NotFound" />
  <error statusCode="500" redirect="Error/InternalServerError" />
</customErrors>
```

2.8.2. App_Start/FilterConfig.cs

```
using System.Web.Mvc;
namespace OnlineGame.Web
{
    public class FilterConfig
    {
        public static void RegisterGlobalFilters(GlobalFilterCollection filters)
        {
            filters.Add(new HandleErrorAttribute());
        }
    }
}
/*
1.
Register Customized Error View
1.1.
Register HandleErrorAttribute to global filter
In Global.asax,
//FilterConfig.RegisterGlobalFilters(GlobalFilters.Filters);
We pass the GlobalFilters.Filters to
//public static void RegisterGlobalFilters(GlobalFilterCollection filters)
Here, we register "HandleErrorAttribute" to global filter.
1.2.
In Web.Config, add the customErrors mode="On"
//<system.web>
//    <customErrors mode="On">
//    </customErrors>
1.3.
Create error view, Views/Shared/Error.cshtml
*/
```

2.8.3. Global.asax.cs

Check the following code in Global.asax.cs

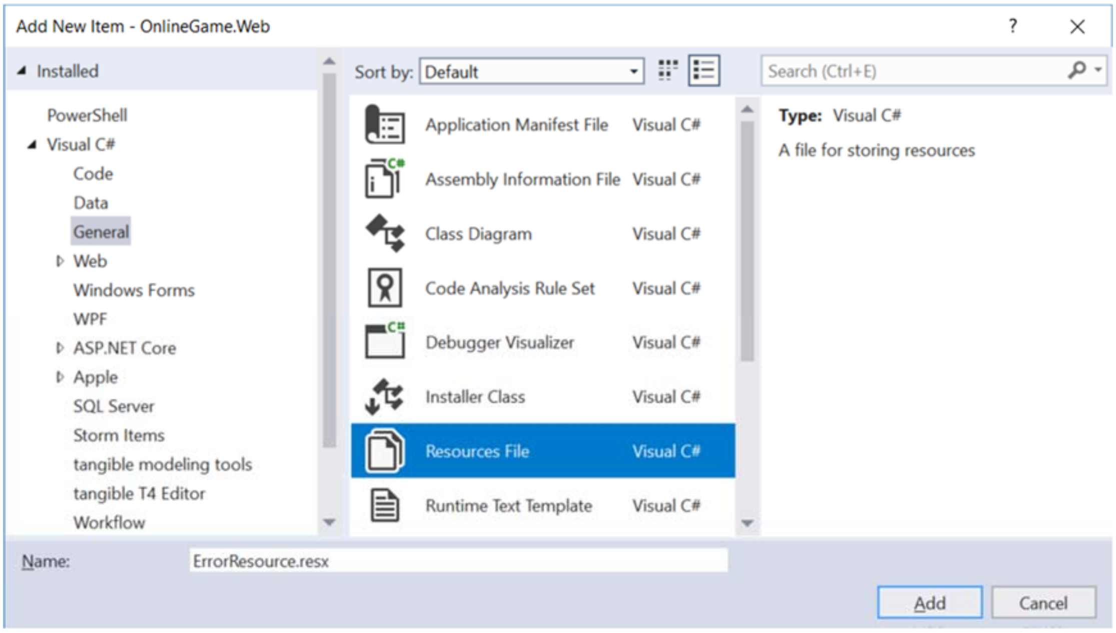
```
//Register HandleErrorAttribute to global filter
FilterConfig.RegisterGlobalFilters(GlobalFilters.Filters);
```

2.8.4. Controllers/ErrorController.cs

```
using System.Web.Mvc;
namespace OnlineGame.Web.Controllers
{
    public class ErrorController : Controller
    {
        //error statusCode="401"
        [HttpGet]
        public ActionResult UnauthorizedError()
        {
            return View();
        }
        //error statusCode="404"
        [HttpGet]
        public ActionResult NotFound()
        {
            return View();
        }
        //error statusCode="500"
        [HttpGet]
        public ActionResult InternalServerError()
        {
            return View();
        }
    }
}
/*
1.
In the Web.config
//<customErrors mode="On" defaultRedirect="Error/DefaultError">
//    <error statusCode="401" redirect="Error/UnauthorizedError" />
//    <error statusCode="404" redirect="Error/NotFound" />
//    <error statusCode="500" redirect="Error/InternalServerError" />
//</customErrors>
We notice that it will still show the Views/Shared/Error.cshtml
when exception occurs.
Thus, we can delete Views/Shared/DefaultError.cshtml.
We also can delete DefaultError() in ErrorController.cs
In the Web.config, we can set as the following.
//<customErrors mode="On">
//    <error statusCode="401" redirect="Error/UnauthorizedError" />
//    <error statusCode="404" redirect="Error/NotFound" />
//    <error statusCode="500" redirect="Error/InternalServerError" />
//</customErrors>
*/
```

2.8.5. Error View

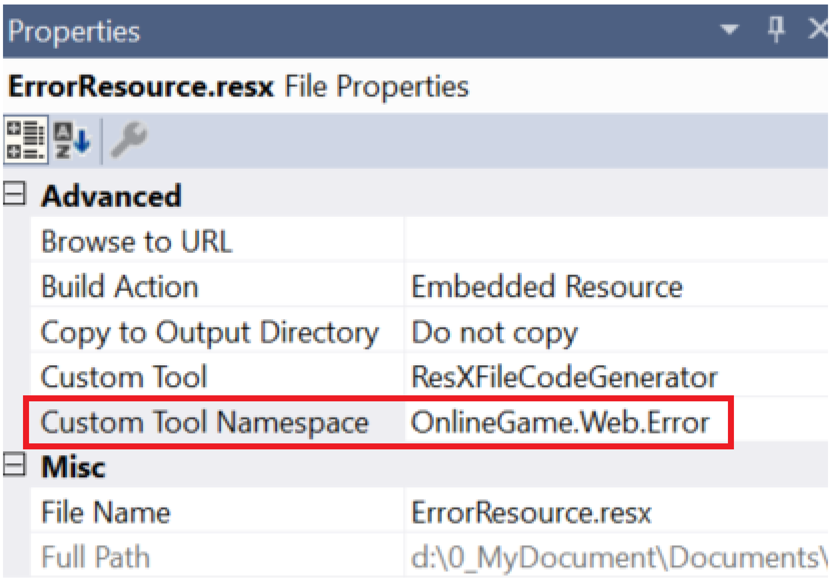
2.8.5.1. Views/Shared/Resource/ErrorResource.resx (NameSpace: OnlineGame.Web.Error)



Type: Visual C#

A file for storing resources

Name: ErrorResource.resx



ErrorResource.resx File Properties

Advanced

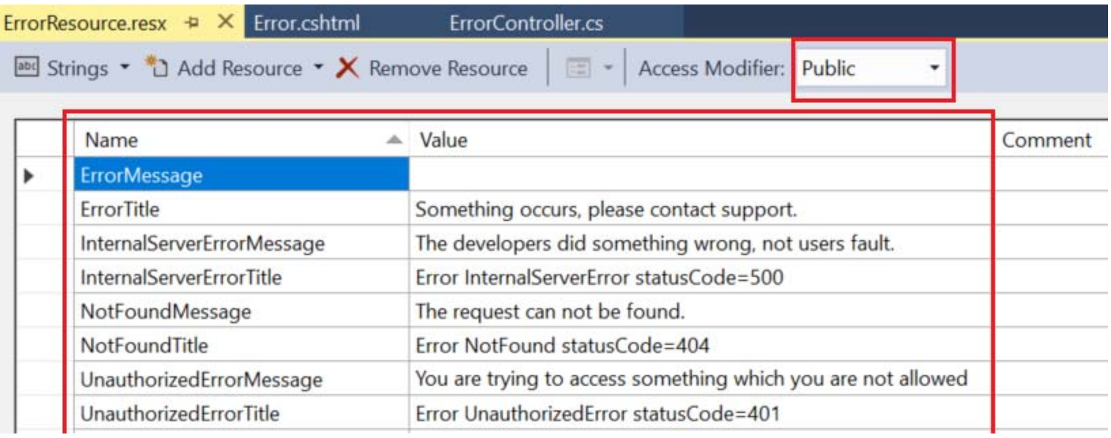
Browse to URL	
Build Action	Embedded Resource
Copy to Output Directory	Do not copy
Custom Tool	ResXFileCodeGenerator
Custom Tool Namespace	OnlineGame.Web.Error

Misc

File Name	ErrorResource.resx
Full Path	d:\0_MyDocument\Documents\

NameSpace

OnlineGame.Web.Error



Access Modifier: Public

Name	Value	Comment
ErrorMessage		
ErrorTitle	Something occurs, please contact support.	
InternalServerErrorMessage	The developers did something wrong, not users fault.	
InternalServerErrorTitle	Error InternalServerError statusCode=500	
NotFoundMessage	The request can not be found.	
NotFoundTitle	Error NotFound statusCode=404	
UnauthorizedErrorMessage	You are trying to access something which you are not allowed	
UnauthorizedErrorTitle	Error UnauthorizedError statusCode=401	

ErrorMessage	
ErrorTitle	Something occurs, please contact support.
InternalServerErrorMessage	The developers did something wrong, not users fault.
InternalServerErrorTitle	Error InternalServerError statusCode=500
NotFoundMessage	The request can not be found.
NotFoundTitle	Error NotFound statusCode=404
UnauthorizedErrorMessage	You are trying to access something which you are not allowed to access.
UnauthorizedErrorTitle	Error UnauthorizedError statusCode=401

ErrorMessage

ErrorTitle

Something occurs, please contact support.

InternalServerErrorMessage
The developers did something wrong, not users fault.

InternalServerErrorTitle
Error InternalServerError statusCode=500

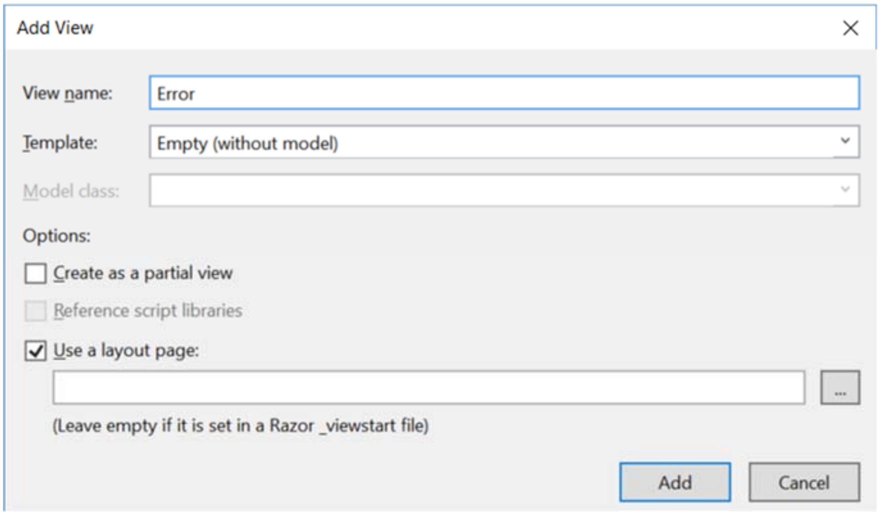
NotFoundMessage
The request can not be found.

NotFoundTitle
Error NotFound statusCode=404

UnauthorizedErrorMessage
You are trying to access something which you are not allowed to access.

UnauthorizedErrorTitle
Error UnauthorizedError statusCode=401

2.8.5.2. Views/Shared/Error.cshtml



Add View

View name: Error

Template: Empty (without model)

Model class:

Options:

☐ Create as a partial view

☐ Reference script libraries

☑ Use a layout page:

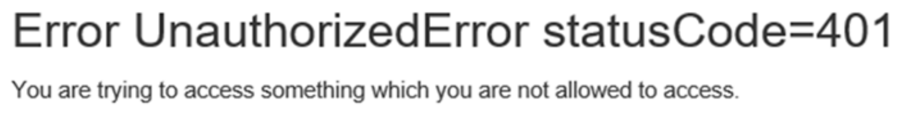
(Leave empty if it is set in a Razor _viewstart file)

```
@using OnlineGame.Web.Error
@{
    ViewBag.Title = "Error";
}
<h2>@ErrorResource.ErrorTitle</h2>
<div>
    @ErrorResource.ErrorMessage
</div>
```

2.8.5.3. Views/Shared/UnauthorizedError.cshtml

```
@using OnlineGame.Web.Error
@{
    ViewBag.Title = "UnauthorizedError";
}
<h2>@ErrorResource.UnauthorizedErrorTitle</h2>
<div>
    @ErrorResource.UnauthorizedErrorMessage
</div>
```

http://localhost/onlinegame.web/Error/UnauthorizedError



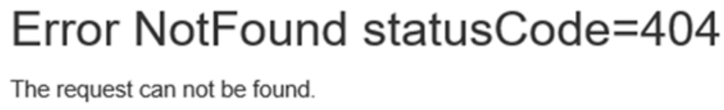
Error UnauthorizedError statusCode=401

You are trying to access something which you are not allowed to access.

2.8.5.4. Views/Shared/NotFound.cshtml

```
@using OnlineGame.Web.Error
@{
    ViewBag.Title = "NotFound";
}
<h2>@ErrorResource.NotFoundTitle</h2>
<div>
    @ErrorResource.NotFoundMessage
</div>
```

http://localhost/onlinegame.web/Error/NotFound



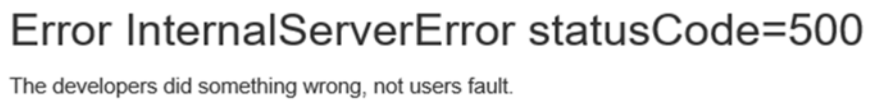
Error NotFound statusCode=404

The request can not be found.

2.7.5.5. Views/Shared/InternalServerError.cshtml

```
@using OnlineGame.Web.Error
@{
    ViewBag.Title = "InternalServerError";
}
<h2>@ErrorResource.InternalServerErrorTitle</h2>
<div>
    @ErrorResource.InternalServerErrorMessage
</div>
```

http://localhost/onlinegame.web/Error/InternalServerError



Error InternalServerError statusCode=500

The developers did something wrong, not users fault.

2.9. WebShare/Attribute

2.9.1. CustomizeCacheAttribute

2.9.1.1. WebShare/Attribute/CustomizeCacheAttribute.cs

```
using System.Web.Mvc;
using System.Web.Configuration;
namespace OnlineGame.Web.WebShare.Attribute
{
    public class CustomizeCacheAttribute : OutputCacheAttribute
    {
        public CustomizeCacheAttribute(string cacheProfileName)
        {
            OutputCacheSettingsSection cacheSettings =
                (OutputCacheSettingsSection)WebConfigurationManager
                .GetSection("system.web/caching/outputCacheSettings");
            OutputCacheProfile cacheProfile = cacheSettings.OutputCacheProfiles[cacheProfileName];
            Duration = cacheProfile.Duration;
            VaryByParam = cacheProfile.VaryByParam;
            VaryByCustom = cacheProfile.VaryByCustom;
        }
    }
}
/*
In Web.config
//<system.web>
//    <caching>
//        <outputCacheSettings>
//        <outputCacheProfiles>
//            <clear/>
//            <add name="outputCacheProfile1" duration="60" varyByParam="none"/>
//        </outputCacheProfiles>
//        </outputCacheSettings>
//    </caching>
//    <customErrors mode="On">
//        <error statusCode="401" redirect="Error/UnauthorizedError" />
//        <error statusCode="404" redirect="Error/NotFound" />
//        <error statusCode="500" redirect="Error/InternalServerError" />
//    </customErrors>
//    <globalization culture="en-au" />
//    <compilation debug="true" targetFramework="4.6.1" />
//    <httpRuntime targetFramework="4.6.1" />
//</system.web>
*/
```

2.9.1.2. The way to use WebShare/Attribute/CustomizeCacheAttribute.cs

The following the controller action method to show you how to use CustomizeCacheAttribute

```
[HttpGet]
//[OutputCache(Duration = 60)]
[OutputCache(CacheProfile = "outputCacheProfile1")]
public async Task<ActionResult> Index4()
{
    return View(await db.Gamers.ToListAsync());
}
//[ChildActionOnly] make the action to be accessible only by a child request,
//so no one can make a direct URL request to this action.
[ChildActionOnly]
[HttpGet]
```

```
//[OutputCache(Duration = 60)]
//[OutputCache(CacheProfile = "outputCacheProfile1")]   //This will thrwo exception
[CustomizeCache("outputCacheProfile1")]
public string GetGamerCount2()
{
    return $"Gamer Count = {db.Gamers.Count()} At {DateTime.Now}";
}
```

2.9.2. DateRangeAttribute, BetweenMinimumDateAndTodayAttribute, BeforeTodayAttribute

2.9.2.1. WebShare/Attribute/DateRangeAttribute.cs

```
using System;
using System.ComponentModel.DataAnnotations;
using System.Globalization;
namespace OnlineGame.Web.WebShare.Attribute
{
    public class DateRangeAttribute : ValidationAttribute
    {
        //private const string DateFormat = "dd/MM/yyyy";
        //private static string DateFormat =
System.Configuration.ConfigurationManager.AppSettings["DateDormat"];
        private const string DateFormat = WebShareConst.DateFormat;
        private const string DefaultErrorMessage = "{0}, '{1}' must be a date between {2:d} and {3:d}.";
        public DateTime MinDate { get; set; }
        public DateTime MaxDate { get; set; }
        public DateRangeAttribute(string minDate, string maxDate)
            : base(DefaultErrorMessage)
        {
            MinDate = ParseDate(minDate);
            MaxDate = ParseDate(maxDate);
        }
        public override bool IsValid(object value)
        {
            if (!(value is DateTime))
            {
                return false;
            }
            DateTime dateValue = (DateTime)value;
            return MinDate <= dateValue && dateValue <= MaxDate;
        }
        public override string FormatErrorMessage(string name)
        {
            return String.Format(CultureInfo.CurrentCulture,
                ErrorMessageString, name, DateFormat, MinDate, MaxDate);
        }
        private static DateTime ParseDate(string dateValue)
        {
            return DateTime.ParseExact(dateValue, DateFormat,
                CultureInfo.InvariantCulture);
        }
    }
}
```

2.9.2.2. WebShare/Attribute/BetweenMinimumDateAndTodayAttribute.cs

```
using System;
using System.ComponentModel.DataAnnotations;
using System.Globalization;
namespace OnlineGame.Web.WebShare.Attribute
{
    public class BetweenMinimumDateAndTodayAttribute : ValidationAttribute
    {
        //private const string DateFormat = "dd/MM/yyyy";
        //private static string DateFormat =
System.Configuration.ConfigurationManager.AppSettings["DateDormat"];
        private const string DateFormat = WebShareConst.DateFormat;
        private const string DefaultErrorMessage = "{0}, '{1}' must be a date between {2:d} and {3:d}.";
        public DateTime MinDate { get; set; }
        private DateTime MaxDate = DateTime.Now;
        public BetweenMinimumDateAndTodayAttribute(string minDate)
            : base(DefaultErrorMessage)
        {
            MinDate = ParseDate(minDate);
        }
        public override bool IsValid(object value)
        {
            if (!(value is DateTime))
            {
                return false;
            }
            DateTime dateValue = (DateTime)value;
            return MinDate <= dateValue && dateValue <= MaxDate;
        }
        public override string FormatErrorMessage(string name)
        {
            return String.Format(CultureInfo.CurrentCulture,
                ErrorMessageString, DateFormat, name, MinDate, MaxDate);
        }
        private static DateTime ParseDate(string dateValue)
        {
            return DateTime.ParseExact(dateValue, DateFormat,
                CultureInfo.InvariantCulture);
        }
    }
}
```

2.9.2.3. WebShare/Attribute/BeforeTodayAttribute.cs

```
using System;
using System.ComponentModel.DataAnnotations;
using System.Globalization;
namespace OnlineGame.Web.WebShare.Attribute
{
    public class BeforeTodayAttribute : ValidationAttribute
    {
        //private const string DateFormat = "dd/MM/yyyy";
        //private static string DateFormat =
System.Configuration.ConfigurationManager.AppSettings["DateDormat"];
        private const string DateFormat = WebShareConst.DateFormat;
        private const string DefaultErrorMessage = "{0}, '{1}' must be a date between {2:d} and {3:d}.";
        private DateTime MinDate = DateTime.MinValue;
        private DateTime MaxDate = DateTime.Now;
        public BeforeTodayAttribute()
            : base(DefaultErrorMessage)
        {
        }
        public override bool IsValid(object value)
        {
            if (!(value is DateTime))
            {
                return false;
            }
            DateTime dateValue = (DateTime)value;
            return MinDate <= dateValue && dateValue <= MaxDate;
        }
        public override string FormatErrorMessage(string name)
        {
            return String.Format(CultureInfo.CurrentCulture,
                ErrorMessageString, DateFormat, name, MinDate, MaxDate);
        }
        private static DateTime ParseDate(string dateValue)
        {
            return DateTime.ParseExact(dateValue, DateFormat,
                CultureInfo.InvariantCulture);
        }
    }
}
```

2.9.2.4. The way to use DateRangeAttribute, BetweenMinimumDateAndTodayAttribute, BeforeTodayAttribute

The following the controller action method to show you how to use this attributes

```
//[Range(typeof(DateTime), "1/1/1970", "1/1/2001", ErrorMessage = "Date is out of Range")]    //Error -
Client Side validation will never pass
//[Range(typeof(DateTime), "1/1/1970", "1/1/2001")] //Error - Client Side validation will never pass
//[DateRange("01/01/1970", "01/01/2001")]
//[DateRange("01/01/1970", DateTime.Now.ToShortDateString())] //Error :  An attribute argument must be a
constant expression
//[BetweenMinimumDateAndToday("01/01/1970")]
[BeforeToday]
//[DisplayFormat(DataFormatString = "{0:dd/MM/yyyy}", ApplyFormatInEditMode = true)]
[DisplayFormat(DataFormatString = WebShareConst.DateStringFormat, ApplyFormatInEditMode = true)]
[Required]
public DateTime DateOfBirth { get; set; }
```

2.9.3. RemoteClientServerAttribute.cs

2.9.3.1. WebShare/Attribute/RemoteClientServerAttribute.cs

```
using System;
using System.Linq;
using System.Web.Mvc;
using  System.ComponentModel.DataAnnotations;
using System.Reflection;
namespace OnlineGame.Web.WebShare.Attribute
{
    public class RemoteClientServerAttribute : RemoteAttribute
     {
        //Implement IsValid() will get the server side validation.
        protected override ValidationResult IsValid(object value, ValidationContext validationContext)
         {
            //1.
            //Using reflection to get the controller that is used by this attribute.
            //In all types of the Executing Assembly, I want the type
            //which the type name is equals to the controller name in route data.
             Type controller = Assembly.GetExecutingAssembly().GetTypes()
                 .FirstOrDefault(type =>
                 String.Equals(type.Name,
                $"{RouteData["controller"].ToString()}Controller",
                 StringComparison.CurrentCultureIgnoreCase));
            if (controller != null)
             {
                //2.
                // Get the action method that is used by this attribute and has validation logic.
                 MethodInfo action = controller.GetMethods()
                     .FirstOrDefault(method =>
                     String.Equals(method.Name,
                     RouteData["action"].ToString(),
                     StringComparison.CurrentCultureIgnoreCase));
                if (action != null)
                 {
                    // Create an instance of the controller class
                    object instance = Activator.CreateInstance(controller);
                    // Invoke the action method that is used by this attribute and has validation logic.
                    // action.Invoke(object obj, object[] parameters)
                    //In our case, it will invoke "IsEmailAvailable" action of "GamerController".
                    object response = action.Invoke(instance, new[] { value });
                    //if (response is JsonResult), then get data.
                    //if (response is JsonResult)
                    //object jsonData = ((JsonResult)response).Data;
                    var result = response as JsonResult;
                    object jsonData = result?.Data;
                    //If the data is true, it means pass the validation.
                    //Otherwise return new ValidationResult(ErrorMessage);
                    if (jsonData is bool)
                     {
                        return (bool)jsonData ?
                             ValidationResult.Success :
                            new ValidationResult(ErrorMessage);
                     }
                 }
             }
            //3.
            //3.1.
            //// return ValidationResult.Success;
            //If we don't find the controller which passed from the attribute,
            //or if we don't find the action that used by the attribute and has validation logic.
            //Then we return validation pass.
            //That means we ignore this validation attribute.
            //3.2.
            // If you want the validation to fail
            ////return new ValidationResult(base.ErrorMessageString);
            return ValidationResult.Success;
        }
        public RemoteClientServerAttribute(string routeName)
            : base(routeName)
        {
        }
        public RemoteClientServerAttribute(string action, string controller)
            : base(action, controller)
        {
        }
        public RemoteClientServerAttribute(string action, string controller,
            string areaName) : base(action, controller, areaName)
        {
        }
    }
}
/*
1.
//Type controller = Assembly.GetExecutingAssembly().GetTypes()
//    .FirstOrDefault(type =>
//    String.Equals(type.Name,
//    $"{RouteData["controller"].ToString()}Controller",
//    StringComparison.CurrentCultureIgnoreCase));
Using reflection to get the controller that is used by this attribute.
In all types of the Executing Assembly, I want the type
which the type name is equals to the controller name in route data.
1.1.
//Assembly.GetExecutingAssembly().GetTypes().FirstOrDefault
In all types of the Executing Assembly
1.2.
//$"{RouteData["controller"].ToString()}Controller"
{RouteData["controller"].ToString()} is the controller name in route data.
//$"{RouteData["controller"].ToString()}Controller"
{NameOfController}+"Controller".
2.
//MethodInfo action = controller.GetMethods()
//    .FirstOrDefault(method =>
//    String.Equals(method.Name,
//    RouteData["action"].ToString(),
//    StringComparison.CurrentCultureIgnoreCase));
2.1.
Get the action method that is used by this attribute and has validation logic.
2.2.
//RouteData["action"].ToString()
RouteData["action"].ToString() is the action name in route data.
The action method uses this attribute and has validation logic.
*/
```

2.9.3.2. The way to use RemoteClientServerAttribute

Please check the Models/Gamer/GamerMetaData.cs

```
//[Remote("IsEmailAvailable", "Gamer", ErrorMessage = "The email has already been taken.")]
//[Remote("IsEmailAvailable", "Gamer", ErrorMessage = WebShareConst.EmailHasBeenTaken)]
//[RemoteClientServer("IsEmailAvailable", "Gamer", ErrorMessage = WebShareConst.EmailHasBeenTaken)]
////Remote attribute can only do the client side validation.
////RemoteClientServer is a customize attribute which can do both client side and server side validation.
////Don't add Remote attribute in shared model, it will affect both Edit and Create mode.
////If you really want to use it, please use two different model classes for Edit and Create mode.
//[RegularExpression(@"^[\w-\._\+%]+@(?:[\w-]+\.)+[\w]{2,6}$", ErrorMessage = "Email is not
valid")]  //EmailAddress Regular Expression
//[RegularExpression(WebShareConst.EmailRegularExpression, ErrorMessage = "Email is not
valid")]  //EmailAddress Regular Expression
[RegularExpression(WebShareConst.EmailRegularExpression, ErrorMessage =
WebShareConst.EmailNotValid)]  //EmailAddress Regular Expression
[Required]
public string EmailAddress { get; set; }



/*
6.
//[Remote("IsEmailAvailable", "Gamer", ErrorMessage = "The email has already been taken.")]
//[Remote("IsEmailAvailable", "Gamer", ErrorMessage = WebShareConst.EmailHasBeenTaken)]
//[RemoteClientServer("IsEmailAvailable", "Gamer", ErrorMessage = WebShareConst.EmailHasBeenTaken)]
//// Don't add Remote attribute in shared model, it will affect both Edit and Create mode.
//// You may use two different model class for create and edit mode.
//public string EmailAddress { get; set; }
6.1.
Remote attribute can only do the client side validation.
RemoteClientServer is a customize attribute which can do both client side and server side validation.
Don't add Remote attribute in shared model, it will affect both Edit and Create mode.
If you really want to use it, please use two different model classes for Edit and Create mode.
6.2.
RemoteAttribute uses AJAX to make an asynchronous call to the server-side method.
If the user disables javascript function of the browser, then it will not work.
Thus, we should also have server-side validation.
6.3.
server-side validation.
In the Create HttpPost Method.
It is hard to read that validation logic is in the controller.
Using validation attributes is always the preferred method.
You may use two different model class for create and edit mode.
//[HttpPost]
//[ValidateAntiForgeryToken]
//public async Task<ActionResult> Create([Bind(Include =
"Id,Name,Gender,City,DateOfBirth,EmailAddress,ConfirmEmailAddress,Score,ProfileUrl,GameMoney,RolePhoto,Ro
lePhotoAltText,TeamId")] Gamer gamer)
//{
//    //If the Email already exists, then add Model validation error
//    if (db.Gamers.Any(g => g.EmailAddress == gamer.EmailAddress))
//    {
//        //AddModelError(Key, ErrorMessage)
//        ModelState.AddModelError("EmailAddress", WebShareConst.EmailHasBeenTaken);
//    }
//    //It is hard to read that validation logic is in controller.
//    //Using validation attributes is always preferred method.
//    if (!ModelState.IsValid)
//    {
//        ViewBag.TeamId = new SelectList(db.Teams, "Id", "Name", gamer.TeamId);
//        return View(gamer);
//    }
//    db.Gamers.Add(gamer);
//    await db.SaveChangesAsync();
//    return RedirectToAction("Index");
//}
6.4.
Another way to has both server side and client side validation,
you have to create your own RemoteClientServerAttribute which extend RemoteAttribute.
*/
```

2.10. Enable client side validation

When we use automatically generate code,
it will also generate the code to enable client side validation.
Let's discuss how it works.

2.10.1. Enable Unobtrusive Validation

Use one of the following methods can enable Unobtrusive Validation.
In our case, we just use the "Web.config" to enable Unobtrusive Validation

2.10.1.1. Enable Unobtrusive Validation Method1 - Web.config

```
<appSettings>
  <add key="webpages:Version" value="3.0.0.0" />
  <add key="webpages:Enabled" value="false" />
 <add key="ClientValidationEnabled" value="true" />
  <add key="UnobtrusiveJavaScriptEnabled" value="true" />
  <add key="ApplicationName" value="Online Game Web" />
</appSettings>
```

2.10.1.2. Enable client side validation Method2 - Global.asax.cs

```
using System.Web.Mvc;
using System.Web.Routing;
using OnlineGame.Web;
namespace OnlineGame.Web
{
    public class MvcApplication : System.Web.HttpApplication
    {
        //Application_Start() is the magic start point of this application
        protected void Application_Start()
        {
            AreaRegistration.RegisterAllAreas();
            //Register HandleErrorAttribute to global filter
            FilterConfig.RegisterGlobalFilters(GlobalFilters.Filters);
            //1.
            //Register Route Configure in RouteConfig.cs
            //If you want to see route configuration,
            //you may find it in RouteConfig.cs
            //2.
            //System.Web.Routing.RouteCollection Routes { get; }
            //Gets a collection of objects that derive from the System.Web.Routing.RouteBase class.
            RouteConfig.RegisterRoutes(RouteTable.Routes);
            ////Enable Unobtrusive validation
            //HtmlHelper.UnobtrusiveJavaScriptEnabled = true;
            //HtmlHelper.ClientValidationEnabled = true;
        }
    }
}
```

2.10.1.3. Enable client side validation Method3 - In the View

```
@{
    ViewBag.Title = "Edit";
    ////Enable client side validation
    //Html.EnableClientValidation(true);
    //Html.EnableUnobtrusiveJavaScript(true);
}
```

2.10.2. In the View

In our case, please check the following file
Views/Gamer/Create.cshtml
Views/Gamer/Edit.cshtml

In our case, we already move these 3 lines to Views/Shared/_Layout.cshtml

```
<script src="~/Scripts/jquery-1.10.2.min.js"></script>
<script src="~/Scripts/jquery.validate.min.js"></script>
<script src="~/Scripts/jquery.validate.unobtrusive.min.js"></script>
```

2.10.3. How it works

2.10.3.1. How it works - Models/Gamer/Gamer.cs

```
[MetadataType(typeof(GamerMetaData))]
public partial class Gamer
```

2.10.3.2. How it works - Models/Gamer/GamerMetaData.cs

Look At Name Property.

```
[StringLength(20, MinimumLength = 2)]
//[RegularExpression(@"^(([A-za-z]+[\s]{1}[A-za-z]+)|([A-Za-z]+))$")] //First Name Last Name
//[RegularExpression(WebShareConst.FirstNameLastNameRegularExpression)] //First Name Last Name
//[RegularExpression(WebShareConst.FirstNameLastNameRegularExpression, ErrorMessage = "Please enter first name or first name and last name.")] //First Name Last Name
```

```
[RegularExpression(WebShareConst.FirstNameLastNameRegularExpression, ErrorMessage =
WebShareConst.FirstNameLastNameNotValid)] //First Name Last Name
[Required]
public string Name { get; set; }
```

2.10.3.3. How it works - Edit.cshtml

Run the Edit.cshtml, and inspect the html when it is running.

```
<input class="form-control text-box single-line valid"
data-val="true"
data-val-length="The field Name must be a string with a minimum length of 2 and a maximum length of
20." data-val-length-max="20" data-val-length-min="2"
data-val-regex="Please enter first name or first name and last name." data-val-regex-pattern="^(([A-za-
z]+[\s]{1}[A-za-z]+)|([A-Za-z]+))$"
data-val-required="The Name field is required."
id="Name" name="Name" type="text" value="NameOne ABB">
```

A.

```
data-val="true"
```

means the unobtrusive validation of this element is enabled.

B.

[StringLength(20, MinimumLength = 2)]

-->

```
data-val-length="The field Name must be a string with a minimum length of 2 and a maximum length of
20." data-val-length-max="20" data-val-length-min="2"
```

C.

```
//[RegularExpression(@"^(([A-za-z]+[\s]{1}[A-za-z]+)|([A-Za-z]+))$")] //First Name Last Name
//[RegularExpression(WebShareConst.FirstNameLastNameRegularExpression)] //First Name Last Name
//[RegularExpression(WebShareConst.FirstNameLastNameRegularExpression, ErrorMessage = "Please enter first
name or first name and last name.")] //First Name Last Name
```

[RegularExpression(WebShareConst.FirstNameLastNameRegularExpression, ErrorMessage = WebShareConst.FirstNameLastNameNotValid)] //First Name Last Name

-->

```
data-val-regex="Please enter first name or first name and last name." data-val-regex-pattern="^(([A-za-
z]+[\s]{1}[A-za-z]+)|([A-Za-z]+))$"
```

D.

[Required]

-->

```
data-val-required="The Name field is required."
```

2.11. Enable client side validation Summary

2.11.1. _Layout.cshtml

A.
"Site.css" must below "bootstrap.min.css",
so "Site.css" will override "bootstrap.min.css".
B.
The "Application Name" action link should set to Gamer controller and Index action.

```
<!DOCTYPE html>
<html>
<head>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>@ViewBag.Title - My ASP.NET Application</title>
    <link href="~/Content/bootstrap.min.css" rel="stylesheet" type="text/css" />
    <link href="~/Content/Site.css" rel="stylesheet" type="text/css" />
    <script src="~/Scripts/modernizr-2.6.2.js"></script>
</head>
<body>
    <div class="navbar navbar-inverse navbar-fixed-top">
        <div class="container">
            <div class="navbar-header">
                <button type="button" class="navbar-toggle" data-toggle="collapse" data-target=".navbar-
collapse">
                    <span class="icon-bar"></span>
                    <span class="icon-bar"></span>
                    <span class="icon-bar"></span>
                </button>
                @Html.ActionLink(System.Configuration.ConfigurationManager.AppSettings["ApplicationName"],
 "Index", "Gamer", new { area = "" }, new { @class = "navbar-brand" })
            </div>
            <div class="navbar-collapse collapse">
                <ul class="nav navbar-nav"></ul>
            </div>
        </div>
    </div>
    <div class="container body-content">
        @RenderBody()
        <hr />
        <footer>
            <p>&copy; @DateTime.Now.Year - My ASP.NET Application</p>
        </footer>
    </div>
    <script src="~/Scripts/jquery-1.10.2.min.js"></script>
    <script src="~/Scripts/bootstrap.min.js"></script>
   <script src="~/Scripts/jquery-ui-1.12.1.min.js"></script>
    <script src="~/Scripts/jquery.validate.min.js"></script>
    <script src="~/Scripts/jquery.validate.unobtrusive.min.js"></script>
    <script src="~/Scripts/operation.js"></script>
</body>
</html>
```

2.11.2. Content/Site.css

```
body {
    padding-top: 50px;
    padding-bottom: 20px;
}
/* Set padding to keep content from hitting the edges */
.body-content {
    padding-left: 15px;
    padding-right: 15px;
}
/* Set width on the form input elements since they're 100% wide by default */
input,
select,
textarea {
    max-width: 280px;
}
/*Override Bootstrap -------------------- */
/*.text-danger {
    color: #b94a48;
}*/
/*validation summary -------------------- */
.validation-summary-valid {
    display: none;
}
/*The validation summary span when validation is valid.*/
.validation-summary-errors {
    color: #b94a48;
    font-weight: bold;
}
/*The validation summary span when validation is invalid.*/
/*field validation -------------------- */
.field-validation-valid {
    display: none;
}
/*The validation span below input textbox when validation is valid.*/
.field-validation-error {
    color: #b94a48;
}
/*The validation span below input textbox when validation is invalid.*/
.input-validation-error {
    border: 1px solid #b94a48;
}
/*The input textbox when validation is invalid.*/
```

2.11.3. In the View - validation Summary

In our case, please check the following file
Views/Gamer/Create.cshtml
Views/Gamer/Edit.cshtml

```
<div>
    @Html.ValidationSummary(false, WebShareConst.ValidationSummaryTitleString)
    @*@Html.ValidationSummary(false, "Please check the following fields.")*@
</div>
```

```
@*
1.
//@Html.ValidationSummary(false, "Please check the following fields.")
//@Html.ValidationSummary(false, @WebShareConst.ValidationSummaryTitleString)
1st parameter is excludePropertyErrors
true to have the summary display model-level errors only,
or false to have the summary display all errors.
*@
```

2.11.4. In the View - Field validation

You may specify the Error Message of "ValidationMessageFor".

```
@Html.ValidationMessageFor(model => model.ConfirmEmailAddress, "", new { @class = "text-danger" })
```

When Error Message is empty string, it will display default error message.

```
@Html.ValidationMessageFor(model => model.ConfirmEmailAddress, "*", new { @class = "text-danger" })
```

This will Error Message string is not empty string,
it will display what you type in that Error Message string.

```
<div class="form-group">
    @Html.LabelFor(model => model.ConfirmEmailAddress, new { @class = "control-label col-md-2" })
    <div class="col-md-10">
        @Html.EditorFor(model => model.ConfirmEmailAddress, new { htmlAttributes = new { @class = "form-control" } })
        @Html.ValidationMessageFor(model => model.ConfirmEmailAddress, "", new { @class = "text-danger" })
        @*@Html.ValidationMessageFor(model => model.ConfirmEmailAddress, "*", new { @class = "text-danger" })*@
    </div>
</div>
```

```
************************************************************************************
```

2.12. Fix the Date format dd/mm/yyy issue - Jquery Validation in Chrome and Safari won't validate with dd/mm/yyyy

Fixed
https://stackoverflow.com/questions/6906725/unobtrusive-validation-in-chrome-wont-validate-with-dd-mm-yyyy

Reference:
https://www.nuget.org/packages/jquery-globalize/1.3.0
https://github.com/globalizejs/globalize
http://devdens.blogspot.com.au/2011/11/jquery-validation-fix-for-date-format_29.html
https://stackoverflow.com/questions/6906725/unobtrusive-validation-in-chrome-wont-validate-with-dd-mm-yyyy
https://stackoverflow.com/questions/14020117/dd-mm-yyyy-date-validation-error-with-google-chrome

2.12.1. Induction

2.12.1.1. Web.config

```
<appSettings>
  <add key="webpages:Version" value="3.0.0.0" />
  <add key="webpages:Enabled" value="false" />
  <add key="ClientValidationEnabled" value="true" />
  <add key="UnobtrusiveJavaScriptEnabled" value="true" />
  <add key="ApplicationName" value="Online Game Web" />
</appSettings>
<system.web>
  <caching>
    <outputCacheSettings>
      <outputCacheProfiles>
        <clear />
        <add name="outputCacheProfile1" duration="60" varyByParam="none" />
      </outputCacheProfiles>
    </outputCacheSettings>
  </caching>
  <customErrors mode="On">
    <error statusCode="401" redirect="Error/UnauthorizedError" />
    <error statusCode="404" redirect="Error/NotFound" />
    <error statusCode="500" redirect="Error/InternalServerError" />
  </customErrors>
  <globalization culture="en-au" uiCulture="en-AU" />
  <compilation debug="true" targetFramework="4.6.1" />
  <httpRuntime targetFramework="4.6.1" />
</system.web>
```

2.12.1.2. WebShare/WebShareConst.cs

```
public const string DateFormat = "dd/MM/yyyy";
public const string DateStringFormat = "{0:dd/MM/yyyy}";
```

2.12.1.3. Models/Gamer/Gamer.cs

```
[MetadataType(typeof(GamerMetaData))]
public partial class Gamer
```

2.12.1.4. Models/Gamer/GamerMetaData.cs

```
//[Range(typeof(DateTime), "1/1/1970", "1/1/2001", ErrorMessage = "Date is out of Range")]    //Error - Client Side validation will never pass
//[Range(typeof(DateTime), "1/1/1970", "1/1/2001")] //Error - Client Side validation will never pass
//[DateRange("01/01/1970", "01/01/2001")]
//[DateRange("01/01/1970", DateTime.Now.ToShortDateString())] //Error :  An attribute argument must be a constant expression
//[BetweenMinimumDateAndToday("01/01/1970")]
[BeforeToday]
//[DisplayFormat(DataFormatString = "{0:dd/MM/yyyy}", ApplyFormatInEditMode = true)]
[DisplayFormat(DataFormatString = WebShareConst.DateStringFormat, ApplyFormatInEditMode = true)]
[Required]
public DateTime DateOfBirth { get; set; }
```

```
/*
3.
//[DisplayFormat(DataFormatString = "{0:dd/MM/yyyy}", ApplyFormatInEditMode = true)]
//public DateTime DateOfBirth { get; set; }
We discuss this at T009 and T010 already.
3.1.
DisplayFormat attribute
3.1.1.
//[DisplayFormat(DataFormatString = "{0:d}")]
Display only the date part. E.g. 29/04/1986
3.1.2.
//[DisplayFormat(DataFormatString = "{0:dd/MM/yyyy HH:mm:ss}")]
Display in 24 hour notation. E.g. 29/04/1986 13:00:00
3.1.3.
//[DisplayFormat(DataFormatString = "{0:dd/MM/yyyy hh:mm:ss tt}")]
Display in 12 hour notation. E.g. 29/04/1986 1:00:00 PM
3.2.
DisplayFormatAttribute attribute
//[DisplayFormatAttribute(DataFormatString="{0:d}")]
Display only the date part. E.g. 29/04/1986
*/
```

2.12.1.5. Views/Gamer/Edit.cshtml   Or Views/Gamer/Create.cshtml

```
<div class="form-group">
    @Html.LabelFor(model => model.DateOfBirth, new { @class = "control-label col-md-2" })
    <div class="col-md-10">
        @Html.EditorFor(model => model.DateOfBirth, new { htmlAttributes = new { @class = "form-control datepicker" } })
        @Html.ValidationMessageFor(model => model.DateOfBirth, "", new { @class = "text-danger" })
    </div>
</div>
```

2.12.2. Fix the Date format dd/mm/yyy issue

If you run the view in IE or FireFox,
then it will work as we expect.
However, if you run the view in Google Chrome or Apple Safari,
Jquery Validation in Chrome and Safari won't validate with dd/mm/yyyy.
You are not alone, if you google "**validation dd/mm/yyyy**" you will find a lot of solutions.

The following is the link which fixes my issue.
Fixed
https://stackoverflow.com/questions/6906725/unobtrusive-validation-in-chrome-wont-validate-with-dd-mm-yyyy

The following is the link which also helps me
Reference:
https://www.nuget.org/packages/jquery-globalize/1.3.0
https://github.com/globalizejs/globalize
http://devdens.blogspot.com.au/2011/11/jquery-validation-fix-for-date-format_29.html
https://stackoverflow.com/questions/6906725/unobtrusive-validation-in-chrome-wont-validate-with-dd-mm-yyyy
https://stackoverflow.com/questions/14020117/dd-mm-yyyy-date-validation-error-with-google-chrome

2.12.2.1. Scripts/operation.js

```
//DateFormate : dd/mm/yyyy
//Reference:
//https://www.w3schools.com/jsref/jsref_obj_regexp.asp
//https://stackoverflow.com/questions/6906725/unobtrusive-validation-in-chrome-wont-validate-with-dd-mm-yyyy
jQuery.validator.methods.date = function (value, element) {
    var dateRegex = /^(0?[1-9]\/|[12]\d\/|3[01]\/){2}(19|20)\d\d$/;
    return this.optional(element) || dateRegex.test(value);
};
$(function () {

});
```

2.12.2.2. Views/Shared/_Layout.cshtml

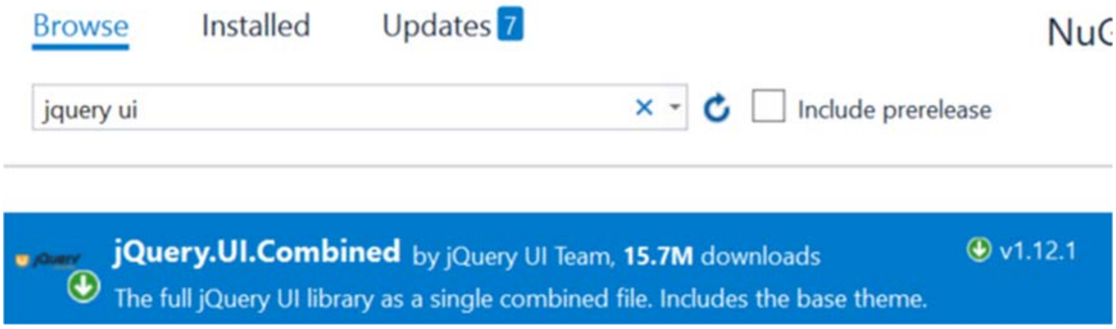
```
<link href="~/Content/bootstrap.min.css" rel="stylesheet" type="text/css" />
<link href="~/Content/Site.css" rel="stylesheet" type="text/css" />
<script src="~/Scripts/modernizr-2.6.2.js"></script>

<script src="~/Scripts/jquery-1.10.2.min.js"></script>
<script src="~/Scripts/bootstrap.min.js"></script>
<script  src="~/Scripts/jquery-ui-1.12.1.min.js"></script>
<script src="~/Scripts/jquery.validate.min.js"></script>
<script src="~/Scripts/jquery.validate.unobtrusive.min.js"></script>
<script src="~/Scripts/operation.js"></script>
```

2.12.3. DatePicker

Reference:
ASP.NET MVC 3: Integrating with the jQuery UI date picker and adding a jQuery validate date range validator
https://blogs.msdn.microsoft.com/stuartleeks/2011/01/25/asp-net-mvc-3-integrating-with-the-jquery-ui-date-picker-and-adding-a-jquery-validate-date-range-validator/

2.12.3.1. Install Jquery UI

Install Jquery UI from NuGet Package



jQuery.UI.Combined by jQuery UI Team, 15.7M downloads v1.12.1
The full jQuery UI library as a single combined file. Includes the base theme.

2.12.3.2. Views/Shared/_Layout.cshtml

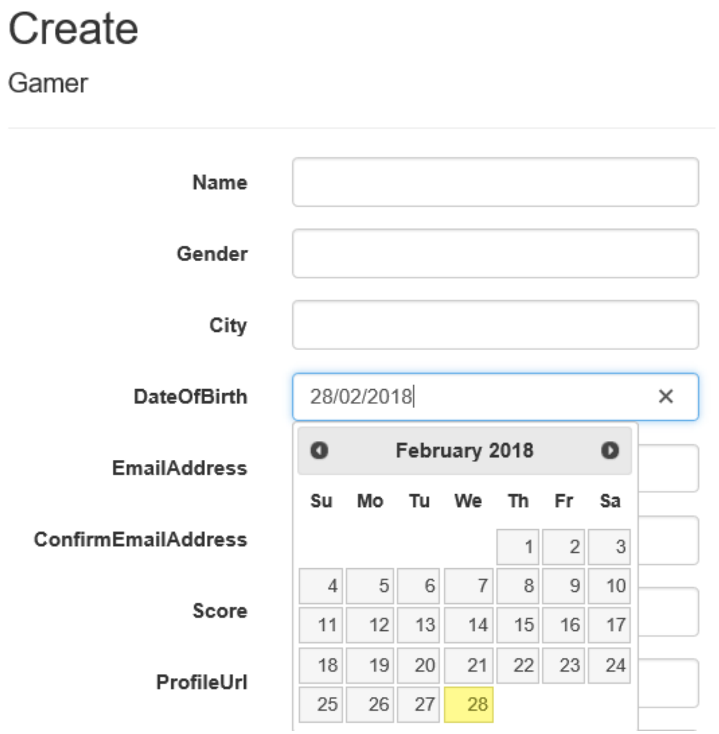
```
@using OnlineGame.Web.WebShare
<!DOCTYPE html>
<html>
<head>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>@ViewBag.Title - My ASP.NET Application</title>
    <link href="~/Content/bootstrap.min.css" rel="stylesheet" type="text/css" />
    <link href="~/Content/themes/base/jquery-ui.min.css" rel="stylesheet" />
    <link href="~/Content/Site.css" rel="stylesheet" type="text/css" />
    @*<script src="~/Scripts/jquery-1.10.2.min.js"></script>*@
    <script src="~/Scripts/jquery-1.12.4.min.js"></script>
    <script src="~/Scripts/modernizr-2.6.2.js"></script>
    <script src="~/Scripts/bootstrap.min.js"></script>
    <script src="~/Scripts/jquery-ui-1.12.1.min.js"></script>
    <script src="~/Scripts/jquery.validate.min.js"></script>
    <script src="~/Scripts/jquery.validate.unobtrusive.min.js"></script>
    <script src="~/Scripts/operation.js"></script>
</head>
<body>
    <div class="navbar navbar-inverse navbar-fixed-top">
        <div class="container">
            <div class="navbar-header">
                <button type="button" class="navbar-toggle" data-toggle="collapse" data-target=".navbar-collapse">
                    <span class="icon-bar"></span>
                    <span class="icon-bar"></span>
                    <span class="icon-bar"></span>
                </button>
                @Html.ActionLink(System.Configuration.ConfigurationManager.AppSettings["ApplicationName"], "Index", "Gamer", new { area = "" }, new { @class = "navbar-brand" })
            </div>
            <div class="navbar-collapse collapse">
                <ul class="nav navbar-nav"></ul>
            </div>
        </div>
    </div>
    <div class="container body-content">
        @RenderBody()
        <hr />
        <footer>
            <p>&copy; @DateTime.Now.Year - My ASP.NET Application</p>
        </footer>
    </div>
    <script type="text/javascript">
        $(function () {
            $('.datepicker').datepicker(
                {
                    //dateFormat: "dd/mm/yy"
                    dateFormat: "@WebShareConst.DateFormatJavascriptString"
                });
        });
    </script>
</body>
</html>
```

2.12.3.3. WebShare/WebShareConst.cs

```
public const string DateFormat = "dd/MM/yyyy";
public const string DateFormatJavascriptString = "dd/mm/yy";
public const string DateStringFormat = "{0:dd/MM/yyyy}";
```

2.12.3.4. Views/Gamer/Edit.cshtml Or Views/Gamer/Create.cshtml

```
<div class="form-group">
    @Html.LabelFor(model => model.DateOfBirth, new { @class = "control-label col-md-2" })
    <div class="col-md-10">
        @Html.EditorFor(model => model.DateOfBirth, new { htmlAttributes = new { @class = "form-control datepicker" } })
        @Html.ValidationMessageFor(model => model.DateOfBirth, "", new { @class = "text-danger" })
    </div>
</div>
```



Create

Gamer

Name

Gender

City

DateOfBirth 28/02/2018 ×

EmailAddress

ConfirmEmailAddress

Score

ProfileUrl

February 2018

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

2.12.3.5. Client Side Date Range

Please follow the instruction here.
https://blogs.msdn.microsoft.com/stuartleeks/2011/01/25/asp-net-mvc-3-integrating-with-the-jquery-ui-date-picker-and-adding-a-jquery-validate-date-range-validator/

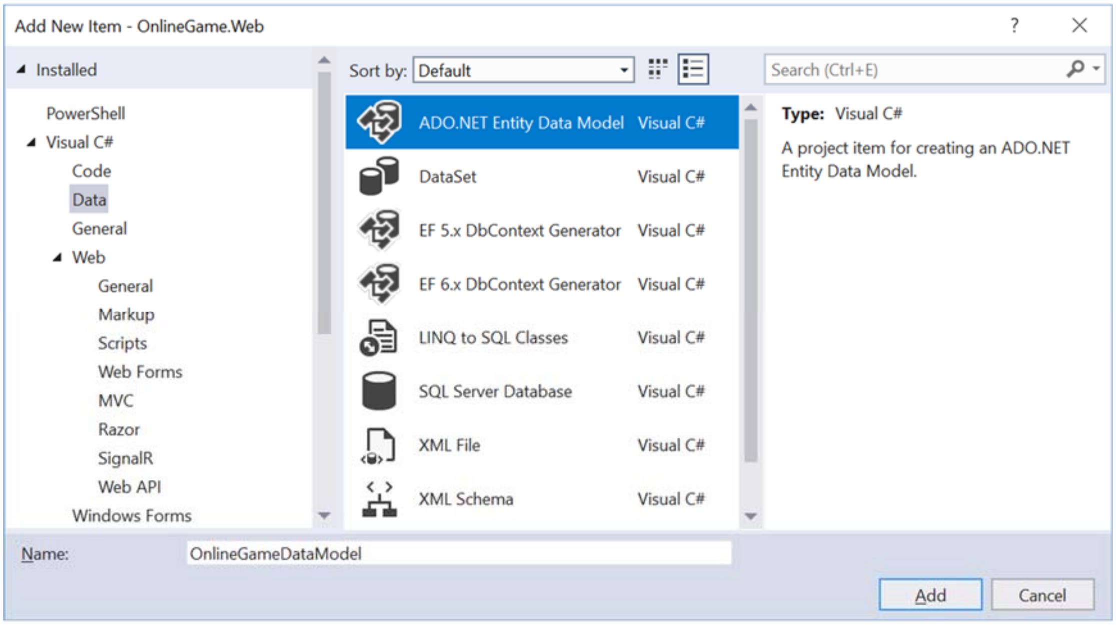
3. OnlineGame.Web

3.1. ADO.Net Entity Data Model - Entity Framework

In Visual Studio 2017
Models folder --> Right Click --> Add --> New Item
--> Visual C# --> Data --> ADO.Net Entity Data Model
Name:
OnlineGameDataModel

-->
EF Designer from database
....

-->
Save Connection settings in Web.Config as:
OnlineGameContext

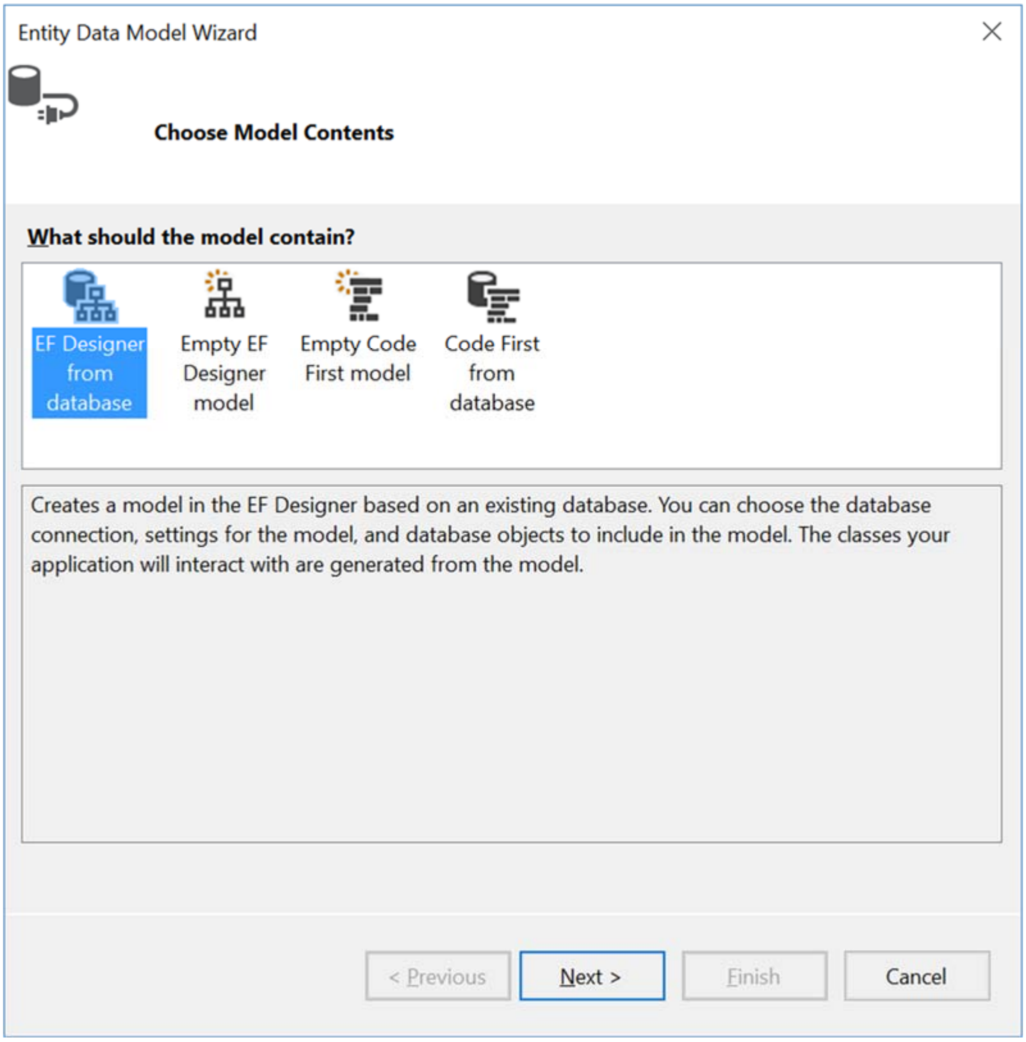

Add New Item - OnlineGame.Web

Sort by: Default

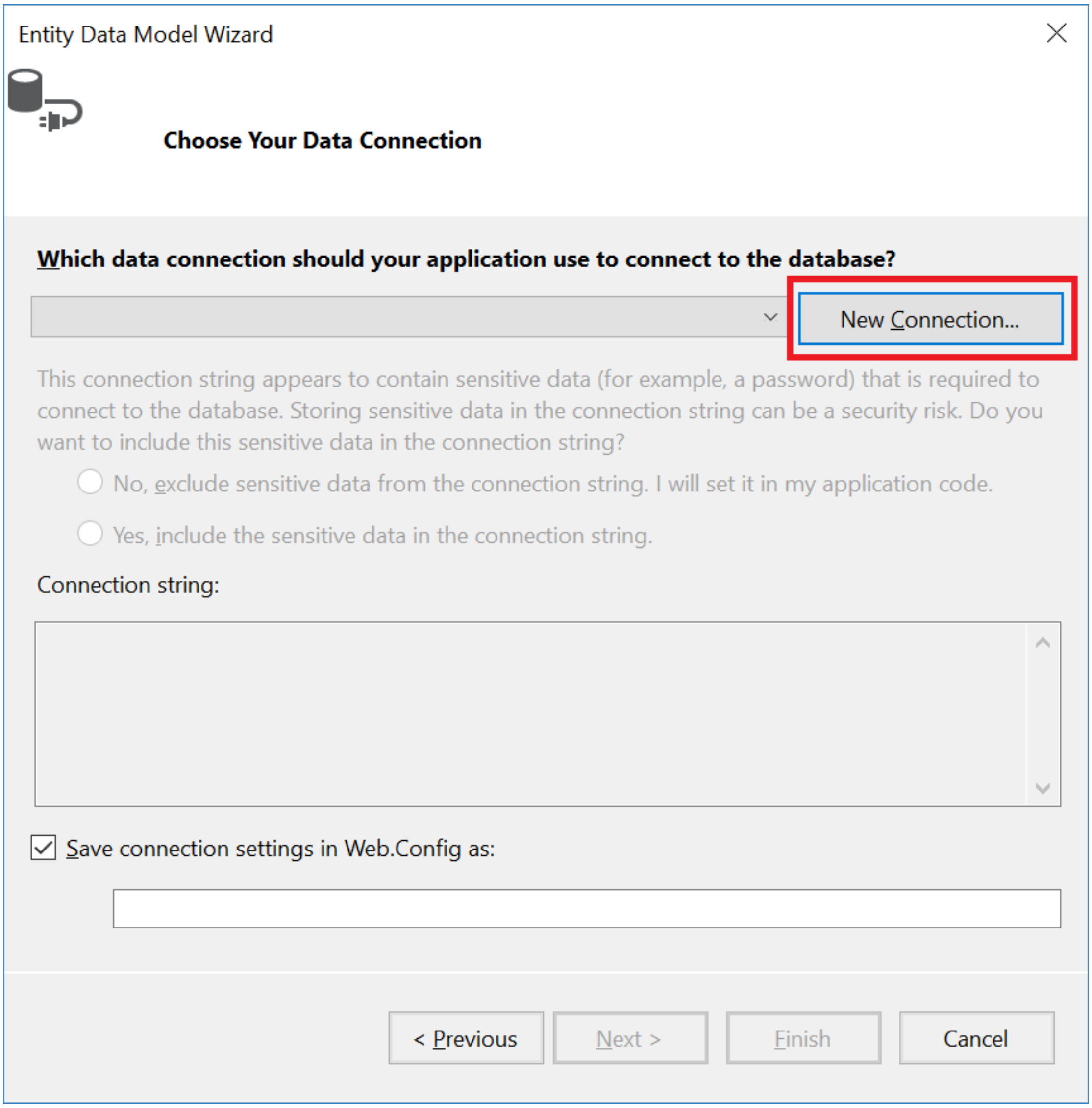
Type: Visual C#

A project item for creating an ADO.NET Entity Data Model.

Name: OnlineGameDataModel



Creates a model in the EF Designer based on an existing database. You can choose the database connection, settings for the model, and database objects to include in the model. The classes your application will interact with are generated from the model.



Entity Data Model Wizard

Choose Your Data Connection

Which data connection should your application use to connect to the database?

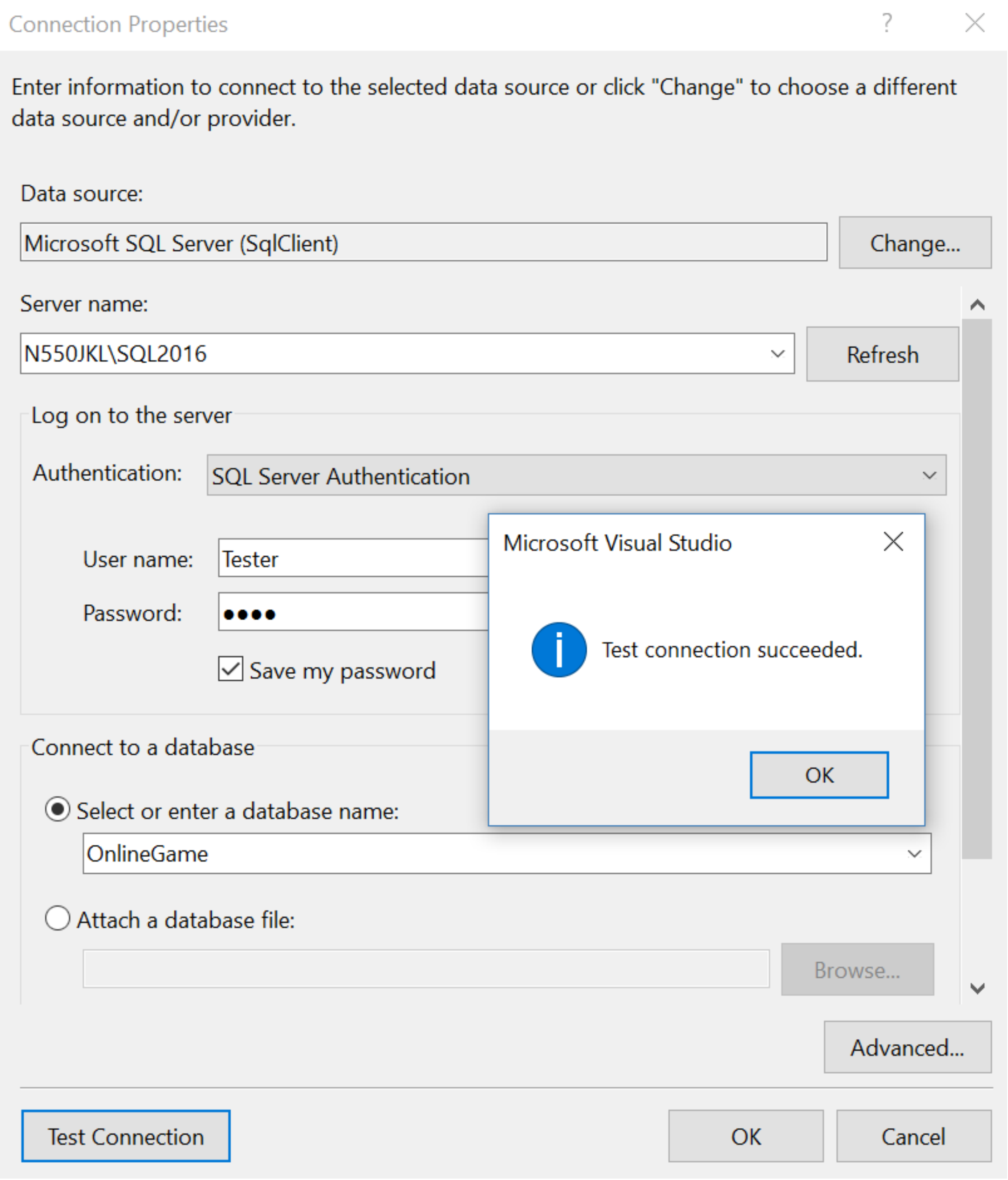
This connection string appears to contain sensitive data (for example, a password) that is required to connect to the database. Storing sensitive data in the connection string can be a security risk. Do you want to include this sensitive data in the connection string?

○ No, exclude sensitive data from the connection string. I will set it in my application code.

○ Yes, include the sensitive data in the connection string.

Connection string:

☑ Save connection settings in Web.Config as:



Connection Properties

Enter information to connect to the selected data source or click "Change" to choose a different data source and/or provider.

Data source: Microsoft SQL Server (SqlClient)

Server name: N550JKL\SQL2016

Log on to the server

Authentication: SQL Server Authentication

User name: Tester

Password: ●●●●

☑ Save my password

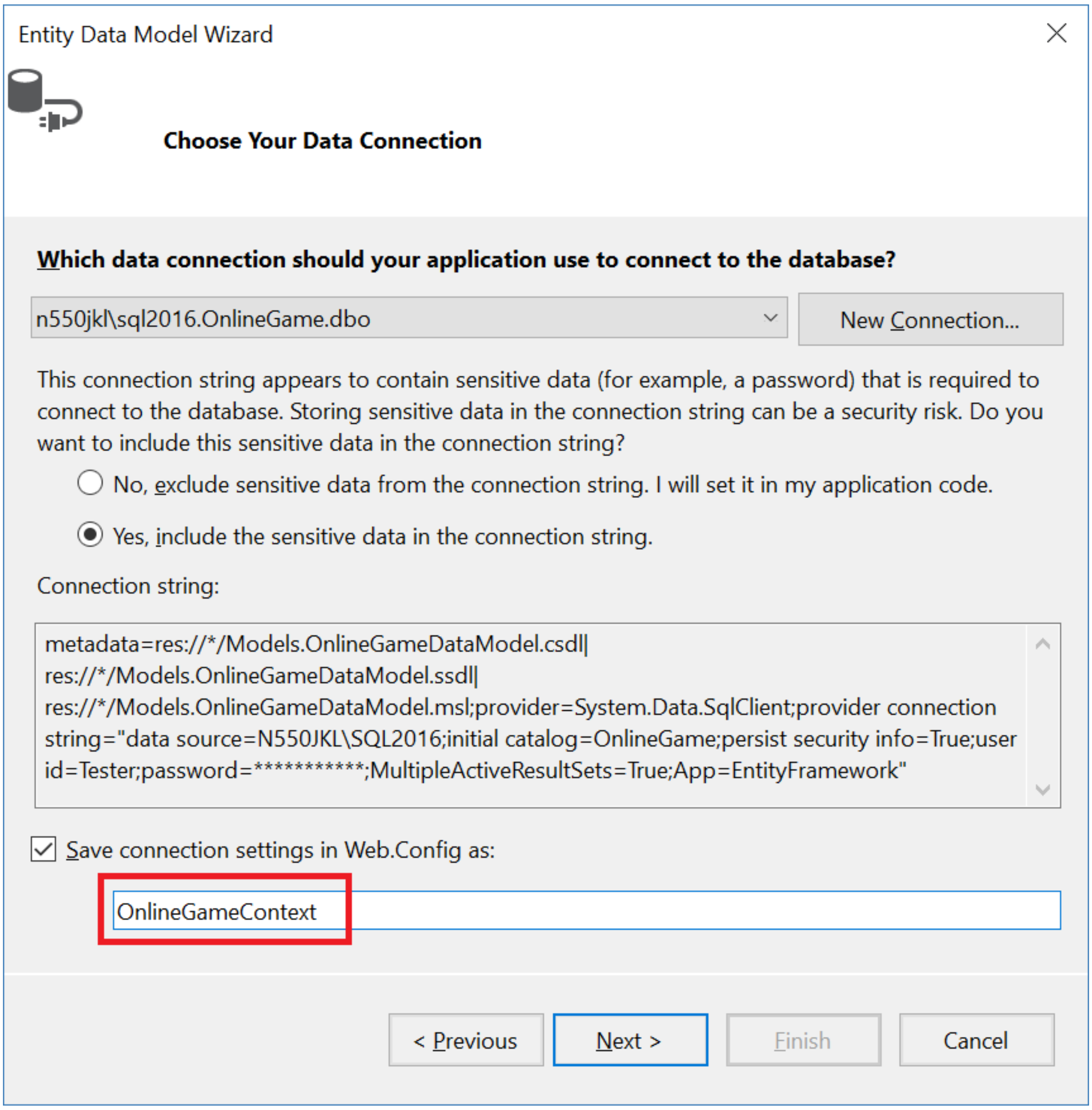
Connect to a database

● Select or enter a database name: OnlineGame

○ Attach a database file:

Microsoft Visual Studio

Test connection succeeded.



Entity Data Model Wizard

Choose Your Data Connection

Which data connection should your application use to connect to the database?

n550jkl\sql2016.OnlineGame.dbo

This connection string appears to contain sensitive data (for example, a password) that is required to connect to the database. Storing sensitive data in the connection string can be a security risk. Do you want to include this sensitive data in the connection string?

○ No, exclude sensitive data from the connection string. I will set it in my application code.

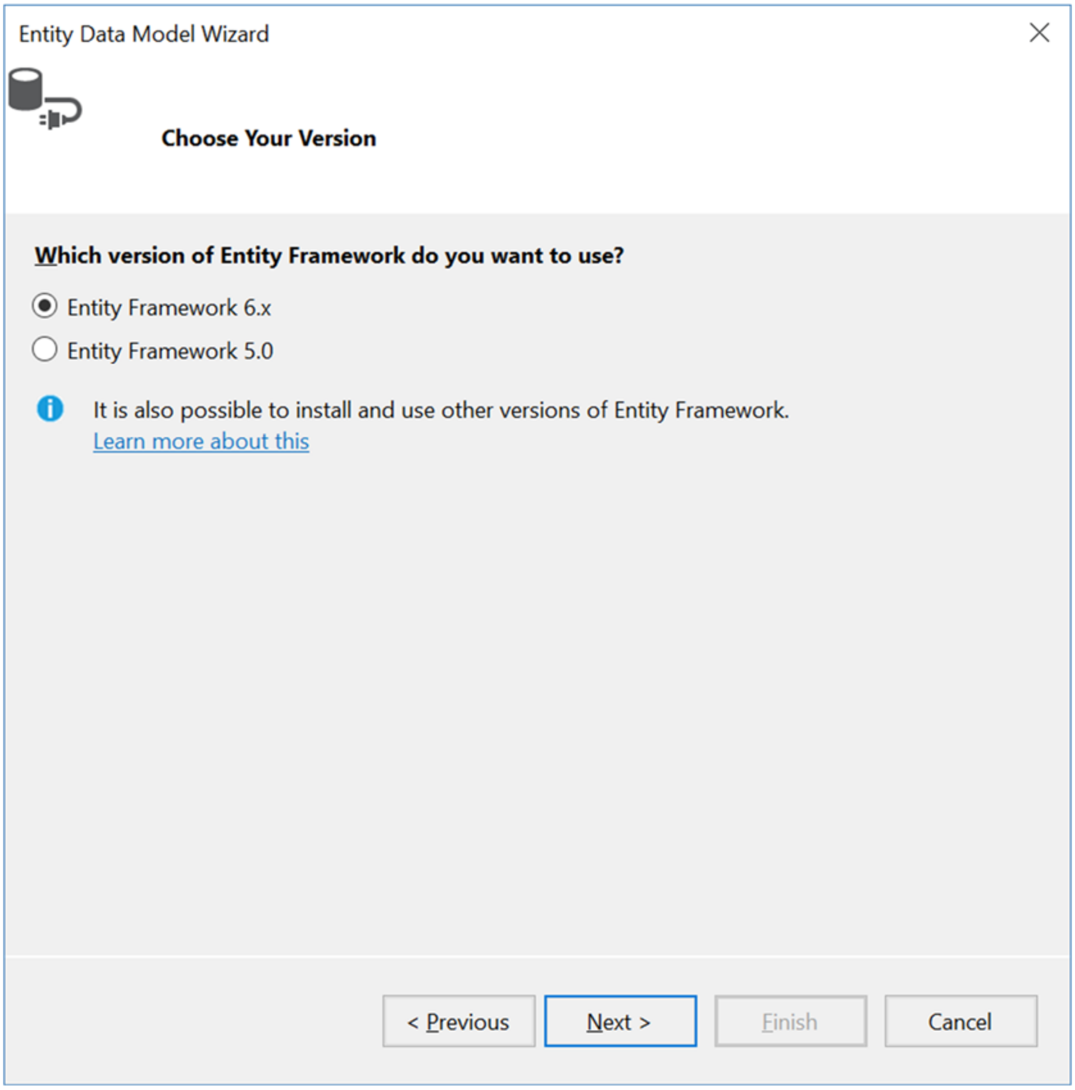
● Yes, include the sensitive data in the connection string.

Connection string:

```
metadata=res://*/Models.OnlineGameDataModel.csdl|
res://*/Models.OnlineGameDataModel.ssdl|
res://*/Models.OnlineGameDataModel.msl;provider=System.Data.SqlClient;provider connection
string="data source=N550JKL\SQL2016;initial catalog=OnlineGame;persist security info=True;user
id=Tester;password=***********;MultipleActiveResultSets=True;App=EntityFramework"
```

☑ Save connection settings in Web.Config as:

OnlineGameContext



Entity Data Model Wizard

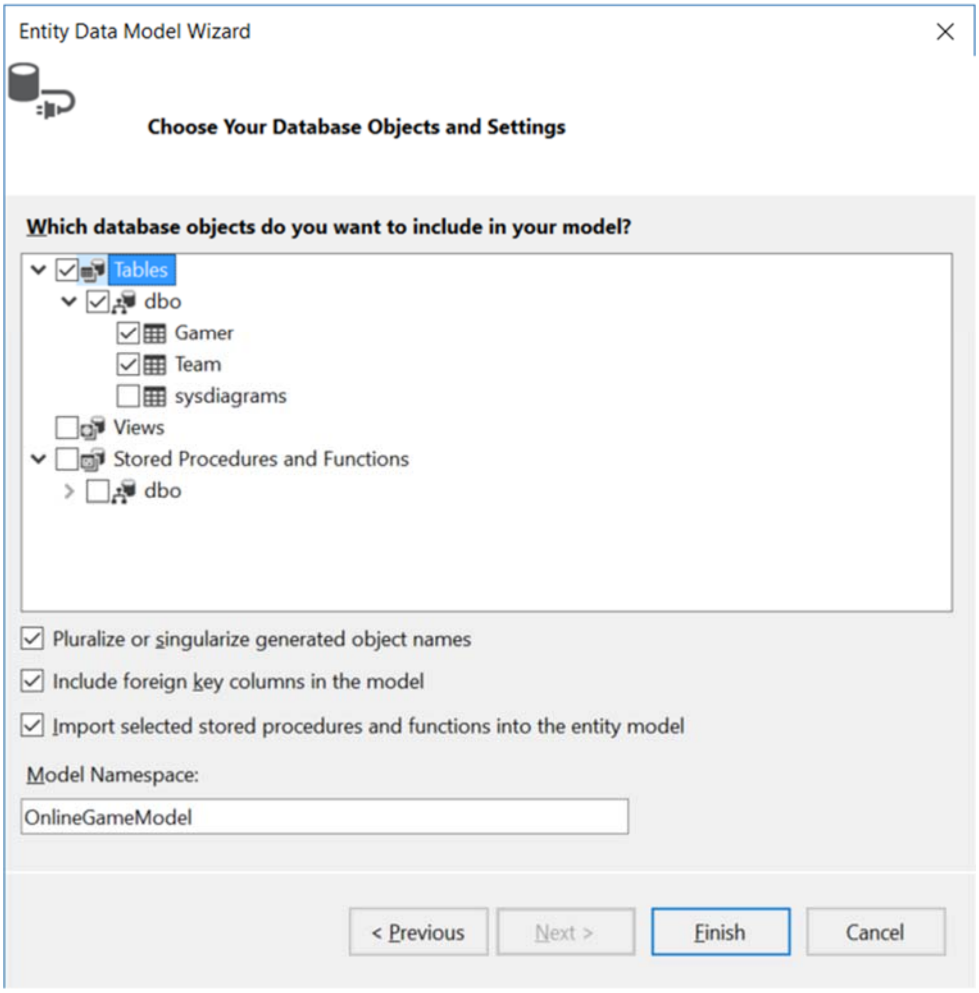
Choose Your Version

Which version of Entity Framework do you want to use?

● Entity Framework 6.x

○ Entity Framework 5.0

It is also possible to install and use other versions of Entity Framework.
Learn more about this



Entity Data Model Wizard

Choose Your Database Objects and Settings

Which database objects do you want to include in your model?

- ☑ Tables
  - ☑ dbo
    - ☑ Gamer
    - ☑ Team
    - □ sysdiagrams
- □ Views
- □ Stored Procedures and Functions
  - □ dbo

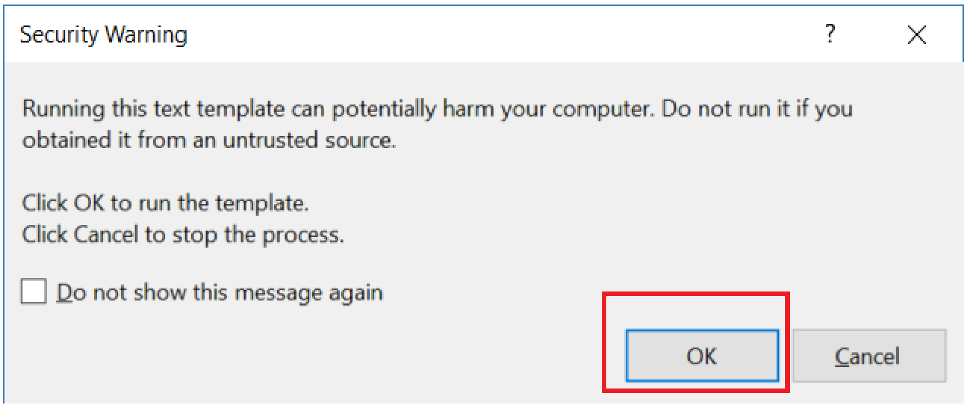
☑ Pluralize or singularize generated object names

☑ Include foreign key columns in the model

☑ Import selected stored procedures and functions into the entity model

Model Namespace:

OnlineGameModel



Security Warning

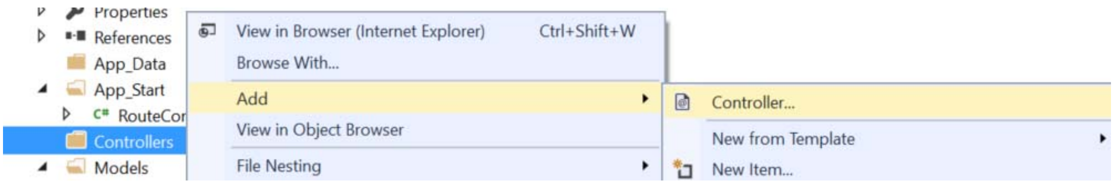
Running this text template can potentially harm your computer. Do not run it if you obtained it from an untrusted source.

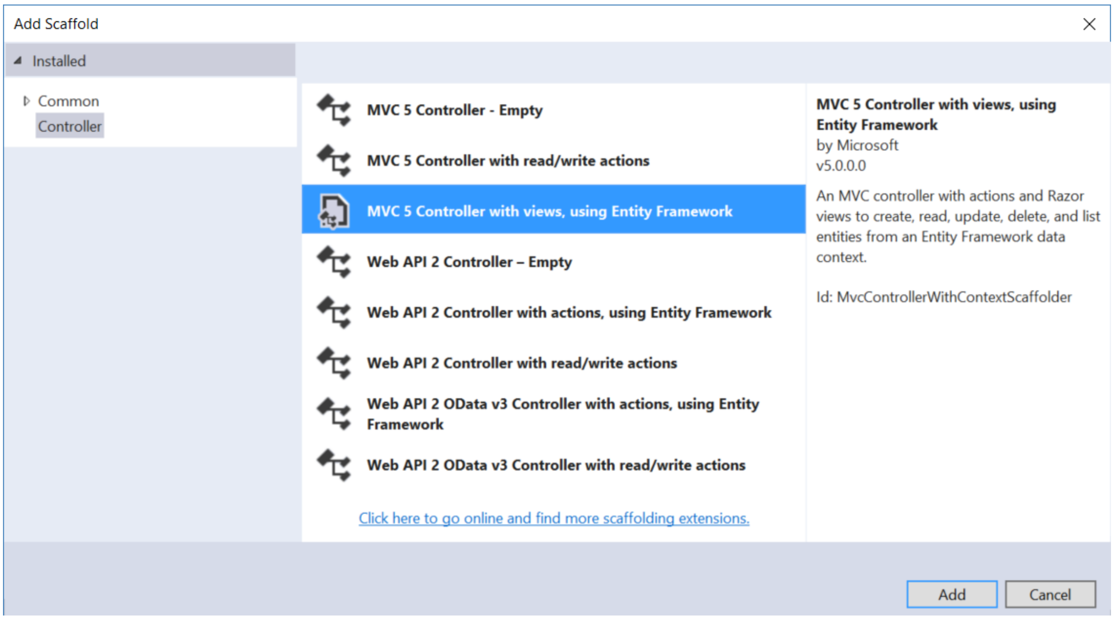
Click OK to run the template.
Click Cancel to stop the process.

□ Do not show this message again

3.2. Controllers/GamerController.cs

Controllers --> Right click --> Add --> Controller
-->
MVC 5 Controller with views, using Entity Framework



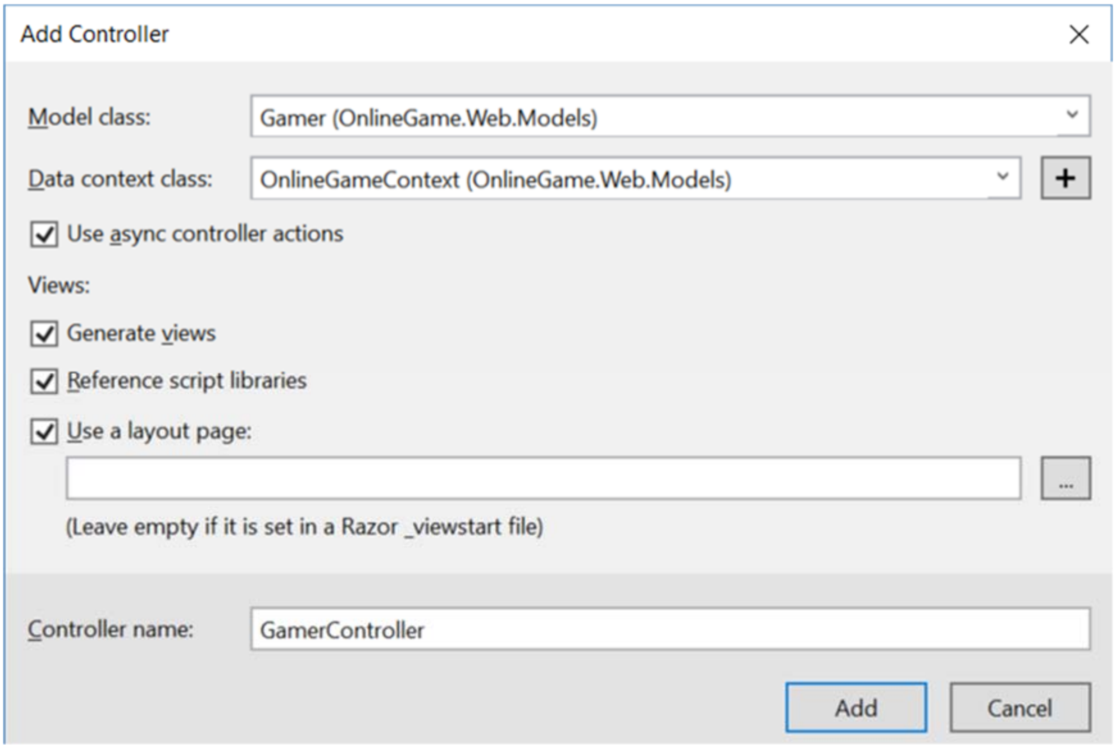


Add Scaffold
Installed
Common
Controller
MVC 5 Controller - Empty
MVC 5 Controller with read/write actions
MVC 5 Controller with views, using Entity Framework
Web API 2 Controller – Empty
Web API 2 Controller with actions, using Entity Framework
Web API 2 Controller with read/write actions
Web API 2 OData v3 Controller with actions, using Entity Framework
Web API 2 OData v3 Controller with read/write actions
Click here to go online and find more scaffolding extensions.
Add
Cancel

MVC 5 Controller with views, using Entity Framework
by Microsoft
v5.0.0.0

An MVC controller with actions and Razor views to create, read, update, delete, and list entities from an Entity Framework data context.

Id: MvcControllerWithContextScaffolder



Add Controller

Model class: Gamer (OnlineGame.Web.Models)

Data context class: OnlineGameContext (OnlineGame.Web.Models)

☑ Use async controller actions

Views:

☑ Generate views

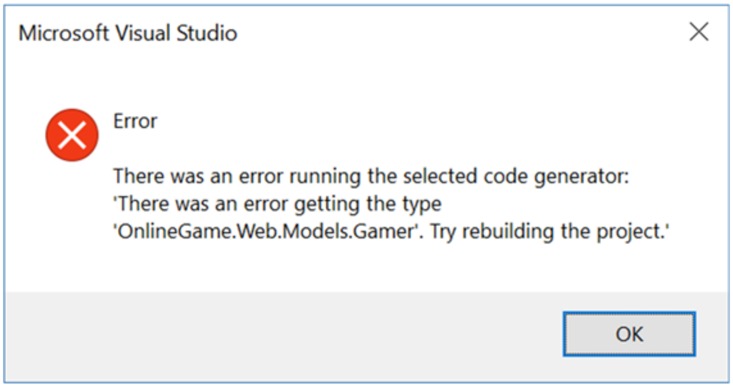
☑ Reference script libraries

☑ Use a layout page:

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

Controller name: GamerController

If you see the following error message, then you have to re-build solution before you create the controller.


Microsoft Visual Studio

Error

There was an error running the selected code generator: 'There was an error getting the type 'OnlineGame.Web.Models.Gamer'. Try rebuilding the project.'

It will automatically generate the controller, views, and several javascript and css files.

4. OnlineGame.Web

4.1. Models/Gamer/Gamer.cs

```
using System.ComponentModel.DataAnnotations;
namespace OnlineGame.Web.Models
{
    [MetadataType(typeof(GamerMetaData))]
    public partial class Gamer
    {
        [Compare("EmailAddress")]
        [Required]
        public string ConfirmEmailAddress { get; set; }
        //ConfirmEmailAddress property will not save into database.
    }
}
/*
1.
//[Compare("EmailAddress")]
//public string ConfirmEmailAddress { get; set; }
Reference:
https://docs.microsoft.com/en-us/aspnet/core/mvc/models/validation
Validates two properties in a model match.
*/
```

4.2. Models/Gamer/GamerMetaData.cs

```
using System;
using System.ComponentModel.DataAnnotations;
using System.Web.Mvc;
using OnlineGame.Web.WebShare;
using OnlineGame.Web.WebShare.Attribute;
namespace OnlineGame.Web.Models
{
    public class GamerMetaData
    {
        //private static readonly string DateFormat =
System.Configuration.ConfigurationManager.AppSettings["DateStringFormat"];
        ////It will not work.
        ////DisplayFormat attribute DataFormatString property only take "DateStringFormat" constant
string.

        [StringLength(20, MinimumLength = 2)]
        //[RegularExpression(@"^(([A-za-z]+[\s]{1}[A-za-z]+)|([A-Za-z]+))$")] //First Name Last Name
        //[RegularExpression(WebShareConst.FirstNameLastNameRegularExpression)] //First Name Last Name
        //[RegularExpression(WebShareConst.FirstNameLastNameRegularExpression, ErrorMessage = "Please
enter first name or first name and last name.")] //First Name Last Name
        [RegularExpression(WebShareConst.FirstNameLastNameRegularExpression, ErrorMessage =
WebShareConst.FirstNameLastNameNotValid)] //First Name Last Name
        [Required]
        public string Name { get; set; }
        //[Remote("IsEmailAvailable", "Gamer", ErrorMessage = "The email has already been taken.")]
        //[Remote("IsEmailAvailable", "Gamer", ErrorMessage = WebShareConst.EmailHasBeenTaken)]
        //[RemoteClientServer("IsEmailAvailable", "Gamer", ErrorMessage =
WebShareConst.EmailHasBeenTaken)]
        ////Remote attribute can only do the client side validation.
        ////RemoteClientServer is a customize attribute which can do both client side and server side
validation.
        ////Don't add Remote attribute in shared model, it will affect both Edit and Create mode.
        ////If you really want to use it, please use two different model classes for Edit and Create mode.
        //[RegularExpression(@"^[\w-\._\+%]+@(?:[\w-]+\.)+[\w]{2,6}$", ErrorMessage = "Email is not
valid")]  //EmailAddress Regular Expression
        //[RegularExpression(WebShareConst.EmailRegularExpression, ErrorMessage = "Email is not
valid")]  //EmailAddress Regular Expression
        [RegularExpression(WebShareConst.EmailRegularExpression, ErrorMessage =
WebShareConst.EmailNotValid)]  //EmailAddress Regular Expression
        [Required]
        public string EmailAddress { get; set; }
        [Range(1, 1000000)]
        [Required]
        public int GameMoney { get; set; }
        //[Range(typeof(DateTime), "1/1/1970", "1/1/2001", ErrorMessage = "Date is out of
Range")]    //Error - Client Side validation will never pass
        //[Range(typeof(DateTime), "1/1/1970", "1/1/2001")] //Error - Client Side validation will never
pass
        //[DateRange("01/01/1970", "01/01/2001")]
        //[DateRange("01/01/1970", DateTime.Now.ToShortDateString())] //Error :  An attribute argument
must be a constant expression
        //[BetweenMinimumDateAndToday("01/01/1970")]
        [BeforeToday]
        //[DisplayFormat(DataFormatString = "{0:dd/MM/yyyy}", ApplyFormatInEditMode = true)]
        [DisplayFormat(DataFormatString = WebShareConst.DateStringFormat, ApplyFormatInEditMode = true)]
        [Required]
        public DateTime DateOfBirth { get; set; }
    }
}
/*
1.
//[StringLength(20, MinimumLength = 2)]
attribute check if the input string has certain length.
If you leave the input textbox as blank, then it does not care.
Thus we need [Required] attribute to ensure the field always has value.
---------------------------------------------
2.
//[Range(1, 1000000)]
//public int GameMoney { get; set; }
The field must be between 1 to 1000000.
---------------------------------------------
3.
```

```
//[DisplayFormat(DataFormatString = "{0:dd/MM/yyyy}", ApplyFormatInEditMode = true)]
//public DateTime DateOfBirth { get; set; }
We discuss this at T009 and T010 already.
3.1.
DisplayFormat attribute
3.1.1.
//[DisplayFormat(DataFormatString = "{0:d}")]
Display only the date part. E.g. 29/04/1986
3.1.2.
//[DisplayFormat(DataFormatString = "{0:dd/MM/yyyy HH:mm:ss}")]
Display in 24 hour notation. E.g. 29/04/1986 13:00:00
3.1.3.
//[DisplayFormat(DataFormatString = "{0:dd/MM/yyyy hh:mm:ss tt}")]
Display in 12 hour notation. E.g. 29/04/1986 1:00:00 PM
3.2.
DisplayFormatAttribute attribute
//[DisplayFormatAttribute(DataFormatString="{0:d}")]
Display only the date part. E.g. 29/04/1986
---------------------------------------------
4.
////[Range(typeof(DateTime), "1/1/1970", "1/1/2001", ErrorMessage = "Date is out of Range")]    //Error -
Client Side validation will never pass
////[Range(typeof(DateTime), "1/1/1970", "1/1/2001")] //Error - Client Side validation will never pass
////[DateRange("01/01/1970", "01/01/2001")]
////[DateRange("01/01/1970", DateTime.Now.ToShortDateString())] //Error :  An attribute argument must be
a constant expression
////[BetweenMinimumDateAndToday("01/01/1970")]
//[BeforeToday]
//[DisplayFormat(DataFormatString = "{0:dd/MM/yyyy}", ApplyFormatInEditMode = true)]
//public DateTime DateOfBirth { get; set; }
Validating a datetime range in EF annotation
We can’t pass a DateTime in as attribute arguments must be const.
We have to build our own Customize Validation Attribute
Reference:
https://blogs.msdn.microsoft.com/stuartleeks/2011/01/25/asp-net-mvc-3-integrating-with-the-jquery-ui-
date-picker-and-adding-a-jquery-validate-date-range-validator/
https://forums.asp.net/t/1831436.aspx?Validating+a+datetime+range+in+EF+annotation
https://stackoverflow.com/questions/13183647/date-range-validation-with-entity-framework-4-data-
annotations
4.1.
[DateRange], [BetweenMinimumDateAndToday], [BeforeToday] are Customize Validation Attributes
Please have a look.
---------------------------------------------
5.
RegularExpression
//[RegularExpression(@"^(([A-za-z]+[\s]{1}[A-za-z]+)|([A-Za-z]+))$")] //First Name Last Name
//public string Name { get; set; }
//[RegularExpression(@"^[\w-\._\+%]+@(?:[\w-]+\.)+[\w]{2,6}$", ErrorMessage = "Please enter a valid email
address")]  //EmailAddress Regular Expression
//public string EmailAddress { get; set; }
Reference:
https://regexr.com/
https://docs.microsoft.com/en-us/dotnet/standard/base-types/regular-expression-language-quick-reference
---------------------------------------------
6.
//[Remote("IsEmailAvailable", "Gamer", ErrorMessage = "The email has already been taken.")]
//[Remote("IsEmailAvailable", "Gamer", ErrorMessage = WebShareConst.EmailHasBeenTaken)]
//[RemoteClientServer("IsEmailAvailable", "Gamer", ErrorMessage = WebShareConst.EmailHasBeenTaken)]
//// Don't add Remote attribute in shared model, it will affect both Edit and Create mode.
//// You may use two different model class for create and edit mode.
//public string EmailAddress { get; set; }
6.1.
Remote attribute can only do the client side validation.
RemoteClientServer is a customize attribute which can do both client side and server side validation.
Don't add Remote attribute in shared model, it will affect both Edit and Create mode.
If you really want to use it, please use two different model classes for Edit and Create mode.
```

```
6.2.
RemoteAttribute uses AJAX to make an asynchronous call to the server-side method.
If the user disables javascript function of the browser, then it will not work.
Thus, we should also have server-side validation.
6.3.
server-side validation.
In the Create HttpPost Method.
It is hard to read that validation logic is in the controller.
Using validation attributes is always the preferred method.
You may use two different model class for create and edit mode.
//[HttpPost]
//[ValidateAntiForgeryToken]
//public async Task<ActionResult> Create([Bind(Include =
"Id,Name,Gender,City,DateOfBirth,EmailAddress,ConfirmEmailAddress,Score,ProfileUrl,GameMoney,RolePhoto,RolePhotoAltText,TeamId")] Gamer gamer)
//{
//    //If the Email already exists, then add Model validation error
//    if (db.Gamers.Any(g => g.EmailAddress == gamer.EmailAddress))
//    {
//        //AddModelError(Key, ErrorMessage)
//        ModelState.AddModelError("EmailAddress", WebShareConst.EmailHasBeenTaken);
//    }
//    //It is hard to read that validation logic is in controller.
//    //Using validation attributes is always preferred method.
//    if (!ModelState.IsValid)
//    {
//        ViewBag.TeamId = new SelectList(db.Teams, "Id", "Name", gamer.TeamId);
//        return View(gamer);
//    }
//    db.Gamers.Add(gamer);
//    await db.SaveChangesAsync();
//    return RedirectToAction("Index");
//}
6.4.
Another way to has both server side and client side validation,
you have to create your own RemoteClientServerAttribute which extend RemoteAttribute.
*/
```

4.3. Controllers/GamerController.cs

```
using System.Data.Entity;
using System.Linq;
using System.Threading.Tasks;
usingSystem.Net;
using System.Web.Mvc;
using System.Web.Script.Serialization;
using OnlineGame.Web.Models;
using OnlineGame.Web.WebShare;
namespace OnlineGame.Web.Controllers
{
    public class GamerController : Controller
     {
        private OnlineGameContext _db = new OnlineGameContext();
        public JsonResult IsEmailAvailable(string emailAddress)
         {
            JsonResult jsonResult = Json(!_db.Gamers.Any(g => g.EmailAddress == emailAddress),
                JsonRequestBehavior.AllowGet);
            //JSONResult to String
            //Reference: https://stackoverflow.com/questions/4571985/jsonresult-to-string
            string jsonResultString = new JavaScriptSerializer().Serialize(jsonResult.Data);
            return jsonResult;
        }
        // GET: Gamer
        [HttpGet]
        public async Task<ActionResult> Index()
        {
            IQueryable<Gamer> gamers = _db.Gamers.Include(g => g.Team);
            return View(await gamers.ToListAsync());
        }
        // GET: Gamer/Details/5
        [HttpGet]
        public async Task<ActionResult> Details(int? id)
        {
            if (id == null)
            {
                return new HttpStatusCodeResult(HttpStatusCode.BadRequest);
            }
            Gamer gamer = await _db.Gamers.FindAsync(id);
            if (gamer == null)
            {
                return HttpNotFound();
            }
            return View(gamer);
        }
        // GET: Gamer/Create
        [HttpGet]
        public ActionResult Create()
        {
            ViewBag.TeamId = new SelectList(_db.Teams, "Id", "Name");
            return View();
        }
        // POST: Gamer/Create
        // To protect from overposting attacks, please enable the specific properties you want to bind to,
for
        // more details see https://go.microsoft.com/fwlink/?LinkId=317598.
        [HttpPost]
        [ValidateAntiForgeryToken]
        public async Task<ActionResult> Create([Bind(Include
= "Id,Name,Gender,City,DateOfBirth,EmailAddress,ConfirmEmailAddress,Score,ProfileUrl,GameMoney,RolePhoto,R
olePhotoAltText,TeamId")] Gamer gamer)
        {
            //Validation Logic
            //If the Email already exists, then add Model validation error
            if (_db.Gamers.Any(g => g.EmailAddress == gamer.EmailAddress))
            {
                //AddModelError(Key, ErrorMessage)
                ModelState.AddModelError("EmailAddress", WebShareConst.EmailHasBeenTaken);
            }
            //It is hard to read that validation logic is in controller.
            //Using validation attributes is always preferred method.
            //You may use two different model class for create and edit mode.
            if (!ModelState.IsValid)
            {
                ViewBag.TeamId = new SelectList(_db.Teams, "Id", "Name", gamer.TeamId);
                return View(gamer);
            }
            _db.Gamers.Add(gamer);
            await _db.SaveChangesAsync();
            return RedirectToAction("Index");
        }
        // GET: Gamer/Edit/5
        [HttpGet]
        public async Task<ActionResult> Edit(int? id)
        {
            if (id == null)
            {
                return new HttpStatusCodeResult(HttpStatusCode.BadRequest);
            }
            Gamer gamer = await _db.Gamers.FindAsync(id);
            if (gamer == null)
            {
                return HttpNotFound();
            }
            gamer.ConfirmEmailAddress = gamer.EmailAddress;
            ViewBag.TeamId = new SelectList(_db.Teams, "Id", "Name", gamer.TeamId);
            return View(gamer);
        }
        // POST: Gamer/Edit/5
        // To protect from overposting attacks, please enable the specific properties you want to bind to,
for
        // more details see https://go.microsoft.com/fwlink/?LinkId=317598.
        [HttpPost]
        [ValidateAntiForgeryToken]
        public async Task<ActionResult> Edit([Bind(Include
= "Id,Name,Gender,City,DateOfBirth,EmailAddress, ConfirmEmailAddress,Score,ProfileUrl,GameMoney,RolePhoto,
RolePhotoAltText,TeamId")] Gamer gamer)
        {
            if (!ModelState.IsValid)
            {
                 ViewBag.TeamId = new SelectList(_db.Teams, "Id", "Name", gamer.TeamId);
                return View(gamer);
            }
            _db.Entry(gamer).State = EntityState.Modified;
            await _db.SaveChangesAsync();
            return RedirectToAction("Index");
        }
        // GET: Gamer/Delete/5
        [HttpGet]
        public async Task<ActionResult> Delete(int? id)
        {
            if (id == null)
            {
                return new HttpStatusCodeResult(HttpStatusCode.BadRequest);
            }
            Gamer gamer = await _db.Gamers.FindAsync(id);
            if (gamer == null)
            {
                return HttpNotFound();
            }
            return View(gamer);
        }
        // POST: Gamer/Delete/5
        [HttpPost, ActionName("Delete")]
        [ValidateAntiForgeryToken]
        public async Task<ActionResult> DeleteConfirmed(int id)
        {
            Gamer gamer = await _db.Gamers.FindAsync(id);
            _db.Gamers.Remove(gamer);
            await _db.SaveChangesAsync();
            return RedirectToAction("Index");
        }
        protected override void Dispose(bool disposing)
        {
            if (disposing)
            {
                _db.Dispose();
            }
            base.Dispose(disposing);
        }
    }
}
```

4.4. Views/Gamer/Edit.cshtml

```
@using OnlineGame.Web.WebShare
@model OnlineGame.Web.Models.Gamer
@{
    ViewBag.Title = "Edit";
    ////Enable client side validation
    //Html.EnableClientValidation(true);
    //Html.EnableUnobtrusiveJavaScript(true);
}
<h2>Edit</h2>
@using (Html.BeginForm())
{
    @Html.AntiForgeryToken()
    <div class="form-horizontal">
        <h4>Gamer</h4>
        <hr />
        @Html.ValidationSummary(true, "", new { @class = "text-danger" })
        @Html.HiddenFor(model => model.Id)
        <div class="form-group">
            @Html.LabelFor(model => model.Name, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.Name, new { htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.Name, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.Gender, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.Gender, new { htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.Gender, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.City, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.City, new { htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.City, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.DateOfBirth, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.DateOfBirth, new { htmlAttributes = new { @class = "form-control datepicker" } })
                @Html.ValidationMessageFor(model => model.DateOfBirth, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.EmailAddress, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.EmailAddress, new { htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.EmailAddress, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.ConfirmEmailAddress, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.ConfirmEmailAddress, new { htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.ConfirmEmailAddress, "", new { @class = "text-danger" })
                @*@Html.ValidationMessageFor(model => model.ConfirmEmailAddress, "*", new { @class = "text-danger"  })*@
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.Score, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.Score, new { htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.Score, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.ProfileUrl, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.ProfileUrl, new { htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.ProfileUrl, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.GameMoney, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
```

```
                @Html.EditorFor(model => model.GameMoney, new { htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.GameMoney, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.RolePhoto, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.RolePhoto, new { htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.RolePhoto, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.RolePhotoAltText, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.RolePhotoAltText, new { htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.RolePhotoAltText, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.TeamId, "TeamId", new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.DropDownList("TeamId", null, new { @class = "form-control" })
                @Html.ValidationMessageFor(model => model.TeamId, "", new { @class = "text-danger" })
            </div>
        </div>
        <div>
            @Html.ValidationSummary(false, WebShareConst.ValidationSummaryTitleString)
        </div>
        <div class="form-group">
            <div class="col-md-offset-2 col-md-10">
                <input type="submit" value="Save" class="btn btn-default" />
            </div>
        </div>
    </div>
}
<div>
    @Html.ActionLink("Back to List", "Index")
</div>
@*<script src="~/Scripts/jquery-1.10.2.min.js"></script>
<script src="~/Scripts/jquery.validate.min.js"></script>
<script src="~/Scripts/jquery.validate.unobtrusive.min.js"></script>*@
@*<script type="text/javascript" language="javascript">
    jQuery.validator.methods.date = function (value, element) {
        var dateRegex = /^(0?[1-9]\/|[12]\d\/|3[01]\/){2}(19|20)\d\d$/;
        return this.optional(element) || dateRegex.test(value);
    };
</script>*@
@*
1.
//@Html.ValidationSummary(false, "Please check the following fields.")
//@Html.ValidationSummary(false, WebShareConst.ValidationSummaryTitleString)
1st parameter is excludePropertyErrors
true to have the summary display model-level errors only,
or false to have the summary display all errors.
*@
```

4.5. Views/Gamer/Create.cshtml

```
@using OnlineGame.Web.WebShare
@model OnlineGame.Web.Models.Gamer
@{
    ViewBag.Title = "Create";
}
<h2>Create</h2>
@using (Html.BeginForm())
{
    @Html.AntiForgeryToken()
    <div class="form-horizontal">
        <h4>Gamer</h4>
        <hr />
        @Html.ValidationSummary(true, "", new { @class = "text-danger" })
        <div class="form-group">
            @Html.LabelFor(model => model.Name, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.Name, new { htmlAttributes = new { @class = "form-
control" } })
                @Html.ValidationMessageFor(model => model.Name, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.Gender, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.Gender, new { htmlAttributes = new { @class = "form-
control" } })
                @Html.ValidationMessageFor(model => model.Gender, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.City, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.City, new { htmlAttributes = new { @class = "form-
control" } })
                @Html.ValidationMessageFor(model => model.City, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.DateOfBirth, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.DateOfBirth, new { htmlAttributes = new { @class = "form-
control datepicker" } })
                @Html.ValidationMessageFor(model => model.DateOfBirth, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.EmailAddress, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.EmailAddress, new { htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.EmailAddress, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.ConfirmEmailAddress, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.ConfirmEmailAddress, new { htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.ConfirmEmailAddress, "", new { @class = "text-danger" })
                @*@Html.ValidationMessageFor(model => model.ConfirmEmailAddress, "*", new { @class = "text-danger" })*@
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.Score, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.Score, new { htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.Score, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.ProfileUrl, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.ProfileUrl, new { htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.ProfileUrl, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.GameMoney, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.GameMoney, new { htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.GameMoney, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.RolePhoto, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.RolePhoto, new { htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.RolePhoto, "", new { @class = "text-danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.RolePhotoAltText, new { @class = "control-label col-md-2" })
            <div class="col-md-10">
```

```
                @Html.EditorFor(model => model.RolePhotoAltText, new { htmlAttributes = new { @class
= "form-control" } })
                @Html.ValidationMessageFor(model => model.RolePhotoAltText, "", new { @class = "text-
danger" })
            </div>
        </div>
        <div class="form-group">
            @Html.LabelFor(model => model.TeamId, "TeamId", new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.DropDownList("TeamId", null, new { @class = "form-control" })
                @Html.ValidationMessageFor(model => model.TeamId, "", new { @class = "text-danger" })
            </div>
        </div>
        <div>
            @Html.ValidationSummary(false, WebShareConst.ValidationSummaryTitleString)
        </div>
        <div class="form-group">
            <div class="col-md-offset-2 col-md-10">
                <input type="submit" value="Create" class="btn btn-default" />
            </div>
        </div>
    </div>
}
<div>
    @Html.ActionLink("Back to List", "Index")
</div>
@*<script src="~/Scripts/jquery-1.10.2.min.js"></script>
<script src="~/Scripts/jquery.validate.min.js"></script>
<script src="~/Scripts/jquery.validate.unobtrusive.min.js"></script>*@
```