(T10)討論EfDbFirst、DisplayImage(圖片顯示)、CustomHtmlHelpers、StronglyTypedViews、PartialView  
CourseGUID: 8503b39c-5887-4634-8291-facfb3117924  
=======================================================================  
(T10)討論EfDbFirst、DisplayImage(圖片顯示)、CustomHtmlHelpers、StronglyTypedViews、PartialView

(T10-1)討論EfDbFirst、DisplayImage(圖片顯示) (1. to 4.)

(T10-2)討論CustomHtmlHelpers、StronglyTypedViews、PartialView (5. to 8.)  
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0. Summary

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In this tutorial, we will discuss

\* AdoDotNetEntityDataModel

\* UpdateDatabase

\* Display Image

\* Custom Html Helpers

\* Using **@Html.Raw("HtmlString")** or using **new IHtmlString("HtmlString")** can disable automatic html encoding and return the markup.

\* Strongly Typed Views

\* Partial View

\* 我的老天鵝要更新現有資料庫和EF!?別怕，有密技。客製化HtmlHelper，PartailView圖片顯示。

\* 老(乾)闆(爹)突然改變主要更改了資料庫結構!!?我的老天鵝，那要怎麼更改目前現有的Entity Framework!?別怕，有密技。

\* 客製化HtmlHelper。

\* PartailView圖片顯示。

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Summary:

1.

//@Html.Partial("\_Gamer", modelObj)  V.S. {  @Html.RenderPartial("\_Gamer", modelObj);  }

1.1.

Using Partial() only if you need to assign the ouput to variable.

RenderPartial() writes ouput to output stream which provides better performance.

1.2.

//@Html.Partial("\_Gamer", modelObj)

Partial return MvcHtmkString.

1.3.

//{  @Html.RenderPartial("\_Gamer", modelObj); }

RenderPartial is a void method and writes ouput to output stream,

so you need { ... }

2.

Using **@Html.Raw("HtmlString")** or using **new IHtmlString("HtmlString")**can disable automatic html encoding and return the markup.

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1. MVC conventions

In MVC conventions,

1. Controllers must have the word "Controller" as the suffix and must extend "IController" interface.

2. A view must remain under "Views" folder.

3. If the view is for GamerController, then the view must remain under "Views/Gamer" folder.

4. In the "HomeController", when "Index" action "return View()", it will search the following files in order.

    4.1. ~/Views/Home/Index.aspx

    4.2. ~/Views/Home/Index.ascx

    4.3. ~/Views/Shared/Index.aspx

    4.4. ~/Views/Shared/Index.ascx

    4.5. ~/Views/Home/Index.cshtml

    4.6. ~/Views/Home/Index.vbhtml

    4.7. ~/Views/Shared/Index.cshtml

    4.8. ~/Views/Shared/Index.vbhtml

5. By MVC convention, MVC will look for the view in the following locations

    5.1. Views/ControllerName

    5.2. Views/Shared

6. The extension name of view can be cshtml, vbhtml, aspx, or ascx.

7. Models can be anywhere, even can be in another project.  However, it is better to put it in "Models" folder.

8. You may put Models in another project as business layer.

9. Shared folder stores shared views.

    E.g. Master for aspx and Layout pages for cshtml

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10. EditorTemplates and DisplayTemplates by MVC convention

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10.1.

DisplayTemplates

10.1.1.

Views\Shared\DisplayTemplates\UrlToNewWindow.cshtml

Views\Gamer\DisplayTemplates\UrlToNewWindow.cshtml

UrlToNewWindow.cshtml is the DisplayTemplate which must under "DisplayTemplates"  folder.

Views\Shared\DisplayTemplates\UrlToNewWindow.cshtml means

the template is available for all the views.

Views\Gamer\DisplayTemplates\UrlToNewWindow.cshtml means

the template is available for only the views of Gamer controller.

10.1.2.

Using DisplayTemplates

10.1.2.1.

In the Models/Gamer/GamerMetaData.cs

//[DataType(DataType.Url)]

//[UIHint("UrlToNewWindow")]

//public string ProfileUrl { get; set; }

[DataType(DataType.Url)] attribute will display a hyperlink.

[UIHint("UrlToNewWindow")] attribute specify the name of view DisplayTemplate

to display the property data.

In this case, it will look for "DisplayTemplates/UrlToNewWindow.cshtml"

under "Shared" folder or "Gamer" folder.

Use that view template to disply the data of this property.

10.1.2.2.

//<a href="@ViewData.Model" target="\_blank">@ViewData.Model</a>

In the Shared/DisplayTemplates/UrlToNewWindow.cshtml,

@ViewData.Model will take the Model data from the parent view.

In this case, it will return a profile url.

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10.2.

EditorTemplates

10.2.1.

Views\Shared\EditorTemplates\DateTime.cshtml

Views\Gamer\EditorTemplates\DateTime.cshtml

DateTime.cshtml is the EditorTemplate which must under "EditorTemplates" folder.

Views\Shared\EditorTemplates\DateTime.cshtml means

the template is available for all the views.

Views\Gamer\EditorTemplates\DateTime.cshtml means

the template is available for only the views of Gamer controller.

10.2.2.

Using EditorTemplates

The EditorTemplate Name must match View Model property Type Name.

E.g. DateTime.ascx or DateTime.cshtml

10.2.2.1.

In the Models/Gamer/GamerMetaData.cs

////[DataType(DataType.Date)] //Views/Shared/EditorTemplates/DateTime.cshtml will not  Work.

////[DisplayFormat(DataFormatString = "{0:dd/MM/yyyy hh:mm:ss tt}")]

//[DisplayFormat(DataFormatString = "{0:d}")]

//public Nullable<System.DateTime> DateOfBirth { get; set; }

The type is DateTime, so it will look for the EditorTemplate from

Views\Shared\EditorTemplates\DateTime.cshtml or

Views\Gamer\EditorTemplates\DateTime.cshtml

In this case, Views\Shared\EditorTemplates\DateTime.cshtml will be the EditorTemplate.

The View Model Property in Edit mode will use the EditorTemplate to display.

In this case,

//@model DateTime?

//@Html.TextBox("", (Model.HasValue ? Model.Value.ToString("yyyy/MM/dd") :  string.Empty), new { @class = "date" })

So it will add the class="date" to the textbox input.

10.2.2.2.

In the Edit.cshtml

//<link href="~/Content/themes/base/jquery-ui.min.css" rel="stylesheet" />

//<link href="~/Content/bootstrap.css" rel="stylesheet" />

//<script src="~/Scripts/jquery-1.12.4.min.js"></script>

//<script src="~/Scripts/jquery-ui-1.12.1.min.js"></script>

//<script src="~/Scripts/bootstrap.min.js"></script>

    ...

//<script type="text/javascript">

//    $(function () {

//        $("input:text.date").datepicker(

//            {

//                dateFormat: "yy/mm/dd"

//            });

//    });

//</script>

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11.

There are 2 categories of built-in templated helpers.

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11.1.

Display Templates

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11.1.1.

//@Html.DisplayFor(model => model.Name)

The view must have strongly typed view Model.

It can work with the complex type Model property.

It is similar to @Html.DisplayTextFor(model => model.GameHolder)

//@Html.DisplayTextFor(model => model.GameHolder)

model.GameHolder will return a Gamer object.

The Gamer class has [DisplayColumn("Name")] attribute,

so it will display Gamer Name property value

which is the full name of that gamer.

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11.1.2.

//@Html.DisplayForModel()

The view must have strongly typed view Model.

It will display every property in view model

except the properties with [ScaffoldColumn(false)] attribute.

-----------------

11.1.3.

@Html.Display helper does not need strongly typed view Mode.

//ViewData["GamerData"] = gamer;

//return View();

In the controller, we put the gamer object into ViewData["GamerData"]

"GamerData" in this case is the key of ViewData.

ViewData["GamerData"] contains that gamer object data,

so we don't have to use a view model.

//@Html.Display("GamerData")

In the view, we use @Html.Display("GamerData")

to retrieve the Gamer data from ViewData["GamerData"].

It will display everything

except the properties with [ScaffoldColumn(false)] attribute.

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11.2.

Editor Templates

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11.2.1.

//@Html.EditorFor(model => model.Name)

The view must have strongly typed view Model.

It will create a textbox for the property value input.

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11.2.2.

//@Html.EditorForModel()

The view must have strongly typed view Model.

It will create textbox input for every property in view model

except the properties with [ScaffoldColumn(false)] attribute.

-----------------

11.2.3.

@Html.Editor helper does not need strongly typed view Mode.

//ViewData["GamerData"] = gamer;

//return View();

In the controller, we put the gamer object into ViewData["GamerData"]

"GamerData" in this case is the key of ViewData.

ViewData["GamerData"] contains that gamer object data,

so we don't have to use a view model.

//@Html.Editor("GamerData")

In the view, we use @Html.Editor("GamerData")

to retrieve the Gamer data from ViewData["GamerData"].

It will create textbox input for every properties in ViewData["GamerData"]

except the properties with [ScaffoldColumn(false)] attribute.

However, we pressed submit button and call the [HttpPost] action

//public async Task<ActionResult>

EditThree(int id, string name, string gender, string city, DateTime? dateOfBirth,  string emailAddress, int? score, string profileUrl, int? gameMoney, int? teamId)

OR

//public async Task<ActionResult>

EditThree(Gamer gamer)

Both ways can not retrieve the data because it is not strongly typed.

I don't suggest to use @Html.Editor helper

2. OnlineGame DB

2.1. TSQL

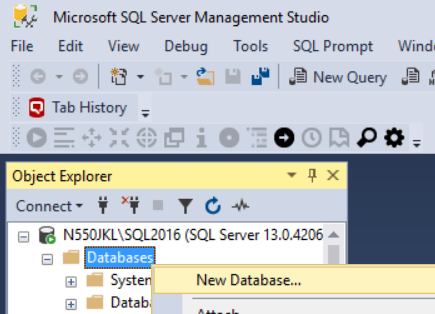
In SQL server Management Studio (SSMS)

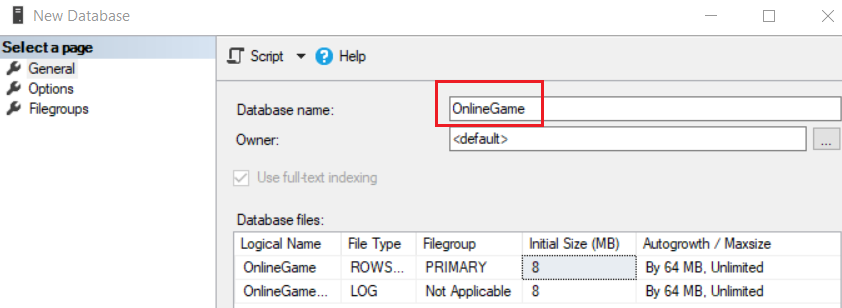
Database --> Right Click --> New Database -->

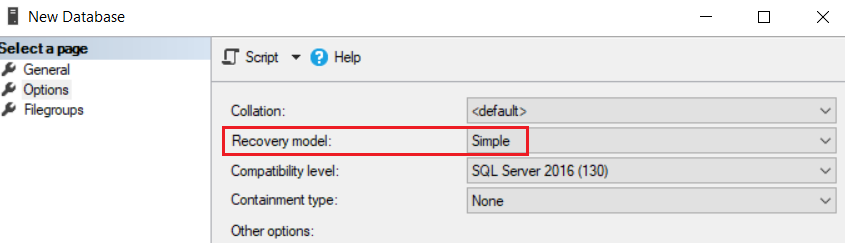
In General Tab -->

Name: **OnlineGame**

In options Tab --> Recovery model : **Simple**







--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

--Drop Stored Procedure if it exists.

--IF OBJECT\_ID('spSearchGamer') IS NOT NULL

IF ( EXISTS ( SELECT    \*

              FROM      INFORMATION\_SCHEMA.ROUTINES

              WHERE     ROUTINE\_TYPE = 'PROCEDURE'

                        AND LEFT(ROUTINE\_NAME, 3) NOT IN ( 'sp\_', 'xp\_', 'ms\_' )

                        AND SPECIFIC\_NAME = 'spGetGamers' ) )

    BEGIN

        DROP PROCEDURE spGetGamers;

    END;

GO -- Run the previous command and begins new batch

IF ( EXISTS ( SELECT    \*

              FROM      INFORMATION\_SCHEMA.ROUTINES

              WHERE     ROUTINE\_TYPE = 'PROCEDURE'

                        AND LEFT(ROUTINE\_NAME, 3) NOT IN ( 'sp\_', 'xp\_', 'ms\_' )

                        AND SPECIFIC\_NAME = 'spAddGamer' ) )

    BEGIN

        DROP PROCEDURE spAddGamer;

    END;

GO -- Run the previous command and begins new batch

IF ( EXISTS ( SELECT    \*

              FROM      INFORMATION\_SCHEMA.ROUTINES

              WHERE     ROUTINE\_TYPE = 'PROCEDURE'

                        AND LEFT(ROUTINE\_NAME, 3) NOT IN ( 'sp\_', 'xp\_', 'ms\_' )

                        AND SPECIFIC\_NAME = 'spSaveGamer' ) )

    BEGIN

        DROP PROCEDURE spSaveGamer;

    END;

GO -- Run the previous command and begins new batch

IF ( EXISTS ( SELECT    \*

              FROM      INFORMATION\_SCHEMA.ROUTINES

              WHERE     ROUTINE\_TYPE = 'PROCEDURE'

                        AND LEFT(ROUTINE\_NAME, 3) NOT IN ( 'sp\_', 'xp\_', 'ms\_' )

                        AND SPECIFIC\_NAME = 'spDeleteGamer' ) )

    BEGIN

        DROP PROCEDURE spDeleteGamer;

    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) 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) NULL ,

      Gender NVARCHAR(10) NULL ,

      City NVARCHAR(50) NULL ,

      DateOfBirth DATETIME NULL ,

      EmailAddress NVARCHAR(100) ,

      Score INT ,

      ProfileUrl NVARCHAR(100) ,

      GameMoney INT,

      TeamId INT FOREIGN KEY REFERENCES Team ( Id )

    );

GO -- Run the previous command and begins new batch

--3. Insert Data

INSERT  Team

VALUES  ( N'Team1' );

INSERT  Team

VALUES  ( N'Team2' );

INSERT  Team

VALUES  ( N'Team3' );

GO -- Run the previous command and begins new batch

INSERT  Gamer

VALUES  ( N'Name01 ABB', N'Male', N'City01', '1979/4/28', '[1@AAA.com](mailto:1@AAA.com)', 3500,

          '<https://ithandyguytutorial.blogspot.com.au/>', 1000, 1 );

INSERT  Gamer

VALUES  ( N'Name02 CDDE', N'Female', N'City03', '1981/7/24', '[2@BBB.com](mailto:2@BBB.com)', 3500,

          '<https://ithandyguytutorial.blogspot.com.au/>', 1500, 2 );

INSERT  Gamer

VALUES  ( N'Name03 FIJK', N'Female', N'City01', '1984/12/5', '[3@CCCC.com](mailto:3@CCCC.com)', 3500,

          '<https://ithandyguytutorial.blogspot.com.au/>', 4000, 3 );

INSERT  Gamer

VALUES  ( N'Name04 LMOPPQ', N'Male', N'City02', '1983/5/29', '[4@DD.com](mailto:4@DD.com)', 3500,

          '<https://ithandyguytutorial.blogspot.com.au/>', 2500, 1 );

INSERT  Gamer

VALUES  ( N'Name05 QRSTT', N'Male', N'City01', '1979/6/20', '[5@EEE.com](mailto:5@EEE.com)', 3500,

          '<https://ithandyguytutorial.blogspot.com.au/>', 3500, 3 );

INSERT  Gamer

VALUES  ( N'Name06 TUVVX', N'Female', N'City03', '1984/5/15', '[6@FF.com](mailto:6@FF.com)',

          3500, '<https://ithandyguytutorial.blogspot.com.au/>', 2500, 3 );

INSERT  Gamer

VALUES  ( N'Name07 XYZZXX', N'Female', N'City01', '1986/4/29', '[7@GGGG.com](mailto:7@GGGG.com)',

          3500, '<https://ithandyguytutorial.blogspot.com.au/>', 4550, 2 );

INSERT  Gamer

VALUES  ( N'Name08 ABBCDE', N'Male', N'City02', '1985/7/28', '[8@HH.com](mailto:8@HH.com)', 3500,

          '<https://ithandyguytutorial.blogspot.com.au/>', 3550, 1 );

INSERT  Gamer

VALUES  ( N'Name09 QRSTTUVXX', N'Male', N'City02', '1983/4/16', '[9@IIII.com](mailto:9@IIII.com)',

          3500, '<https://ithandyguytutorial.blogspot.com.au/>', 2510, 1 );

GO -- Run the previous command and begins new batch

--4. SP

CREATE PROCEDURE spGetGamers

AS

    BEGIN

        SELECT  \*

        FROM    Gamer;

    END;

GO -- Run the previous command and begins new batch

CREATE PROCEDURE spAddGamer

    (

      @Name NVARCHAR(50) ,

      @Gender NVARCHAR(10) ,

      @City NVARCHAR(50) ,

      @DateOfBirth DateTime ,

         @EmailAddress NVARCHAR(100) ,

      @Score INT ,

      @ProfileUrl NVARCHAR(100) ,

         @GameMoney INT,

      @TeamId INT

    )

AS

    BEGIN

        INSERT  INTO Gamer

        VALUES  ( @Name, @Gender, @City, @DateOfBirth, @EmailAddress, @Score, @ProfileUrl, @GameMoney, @TeamId );

    END;

GO -- Run the previous command and begins new batch

CREATE PROCEDURE spSaveGamer

    (

      @Id INT ,

      @Name NVARCHAR(50) ,

      @Gender NVARCHAR(10) ,

      @City NVARCHAR(50) ,

      @DateOfBirth DateTime ,

         @EmailAddress NVARCHAR(100) ,

      @Score INT ,

      @ProfileUrl NVARCHAR(100) ,

         @GameMoney INT,

      @TeamId INT

    )

AS

    BEGIN

        UPDATE  dbo.Gamer

        SET     Name = @Name ,

                Gender = @Gender ,

                City = @City ,

                DateOfBirth = @DateOfBirth ,

                             EmailAddress = @EmailAddress ,

                             Score = @Score ,

                             ProfileUrl = @ProfileUrl ,

                             GameMoney = @GameMoney ,

                TeamId = @TeamId

        WHERE   Id = @Id;

    END;

GO -- Run the previous command and begins new batch

CREATE PROCEDURE spDeleteGamer ( @Id int )

AS

    BEGIN

        DELETE  FROM Gamer

        WHERE   Id = @Id;

    END;

GO -- Run the previous command and begins new batch

--EXEC spGetGamers

--GO -- Run the previous command and begins new batch

2.2. 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.







Graphical user interface, application

Description automatically generated

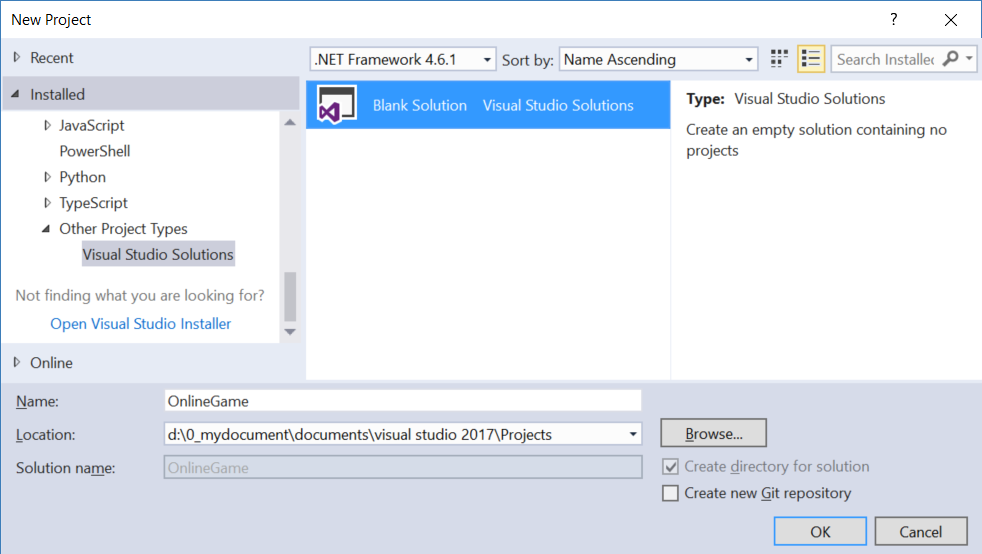
3. New Project - OnlineGame

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

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

-->

Name: **OnlineGame**



3.1. New Project - OnlineGame.Web

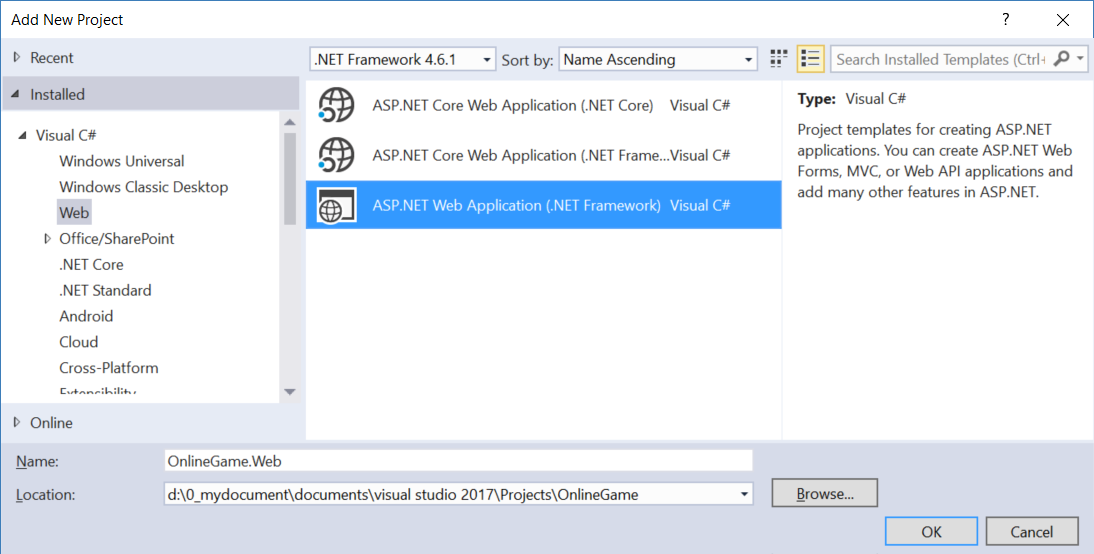
Solutions Name --> Add --> New Project -->

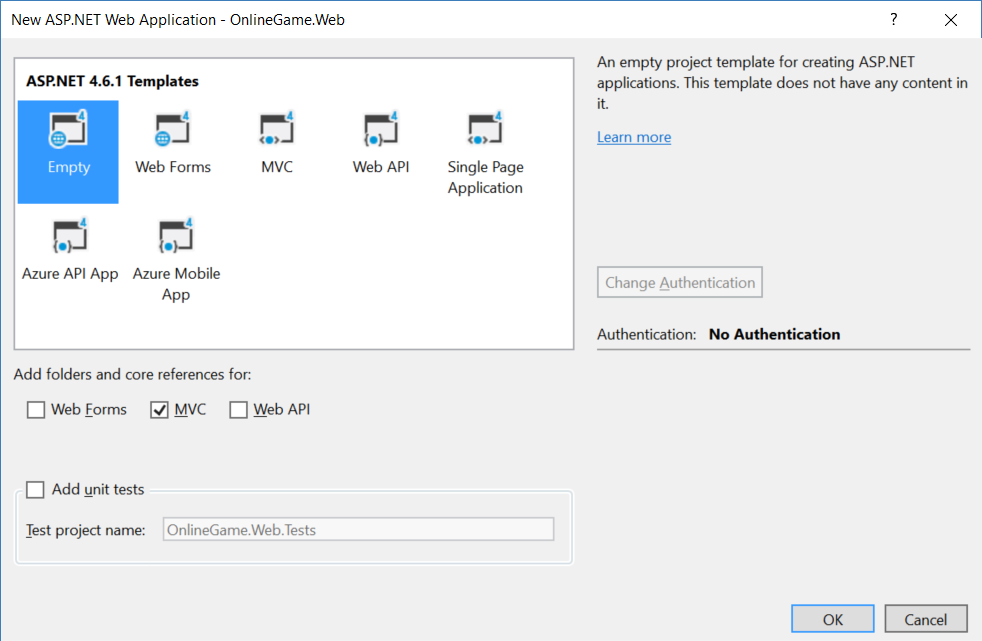
Visual C# --> Web --> [ASP.NET](http://asp.net/)Web Application (.Net Framework)

-->

Name: **OnlineGame.Web**

Empty --> Select "MVC" --> OK





3.1.1. Global.asax.cs

using System.Web.Mvc;

using System.Web.Routing;

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();

            //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);

        }

    }

}

3.1.2. 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](http://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](http://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](http://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](http://asp.net/) trace, trace.axd.

If you do not have

// routes.IgnoreRoute("{resource}.axd/{\*pathInfo}");

then you can not enable the trace.axd.

\*/

3.2. ADO.Net Entity Data Model - Entity Framework

In Visual Studio 2017

**Models** folder --> Right Click --> Add --> New Item

--> Visual C# --> Data  -->  [ADO.Net](http://ado.net/) Entity Data Model

Name:

**OnlineGameDataModel**

-->

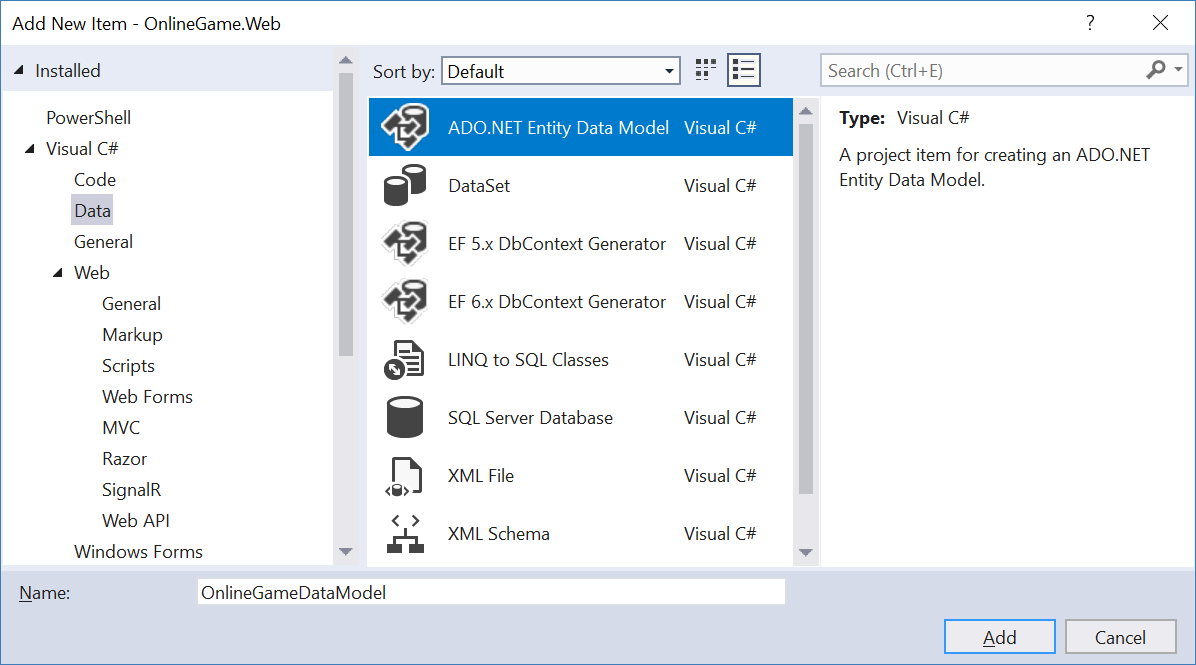
EF Designer from database

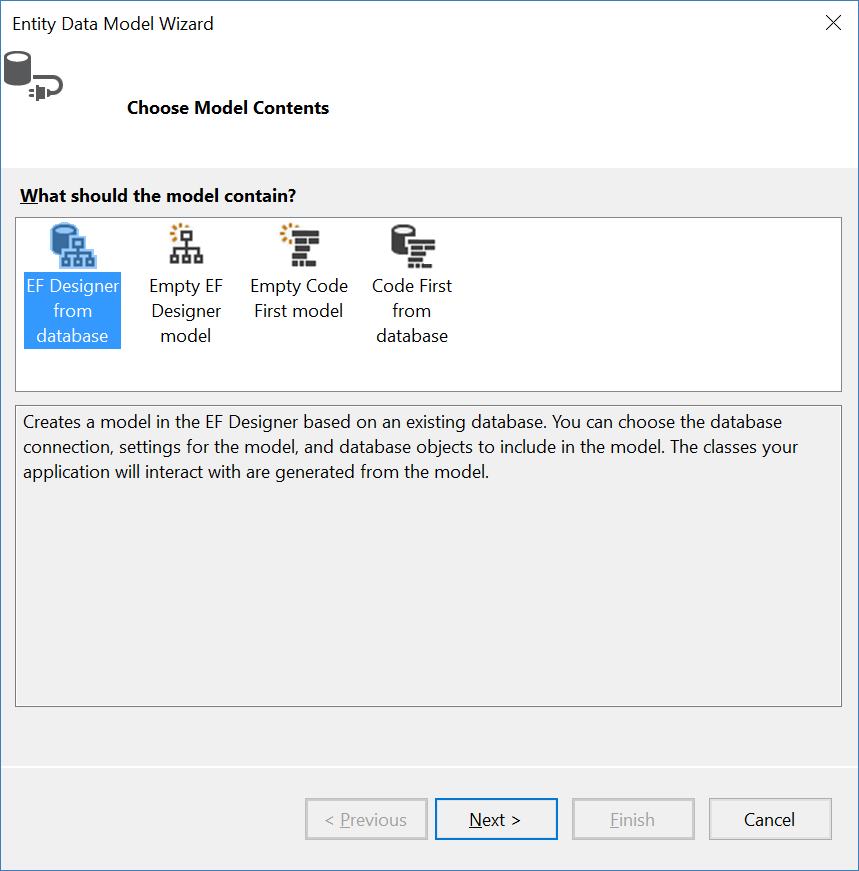
....

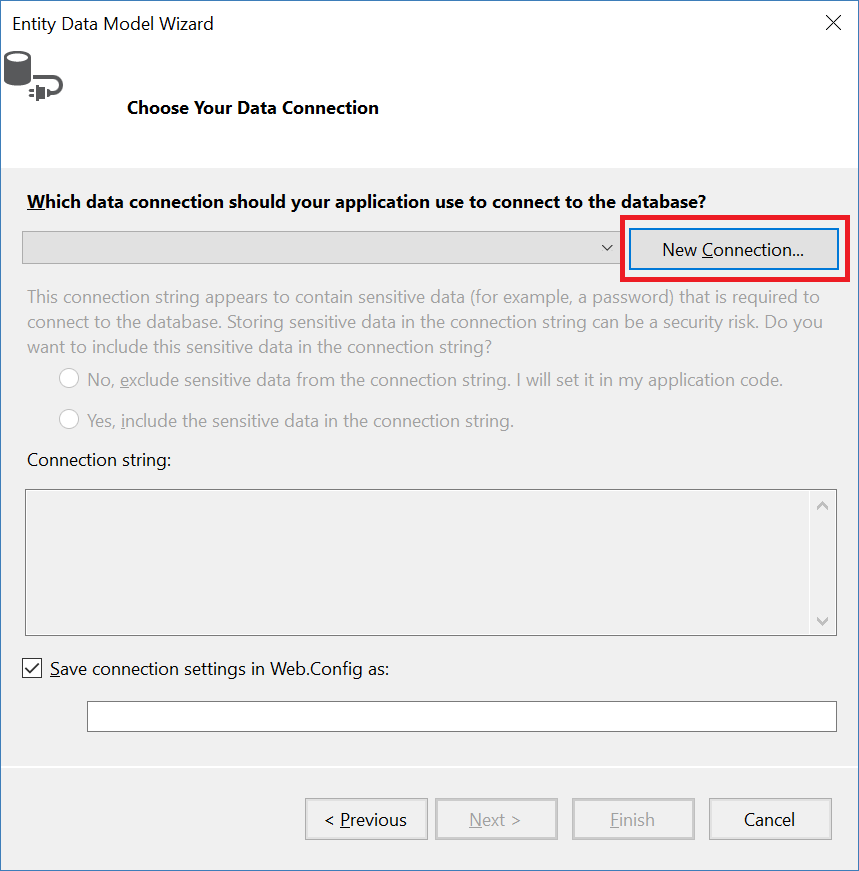
-->

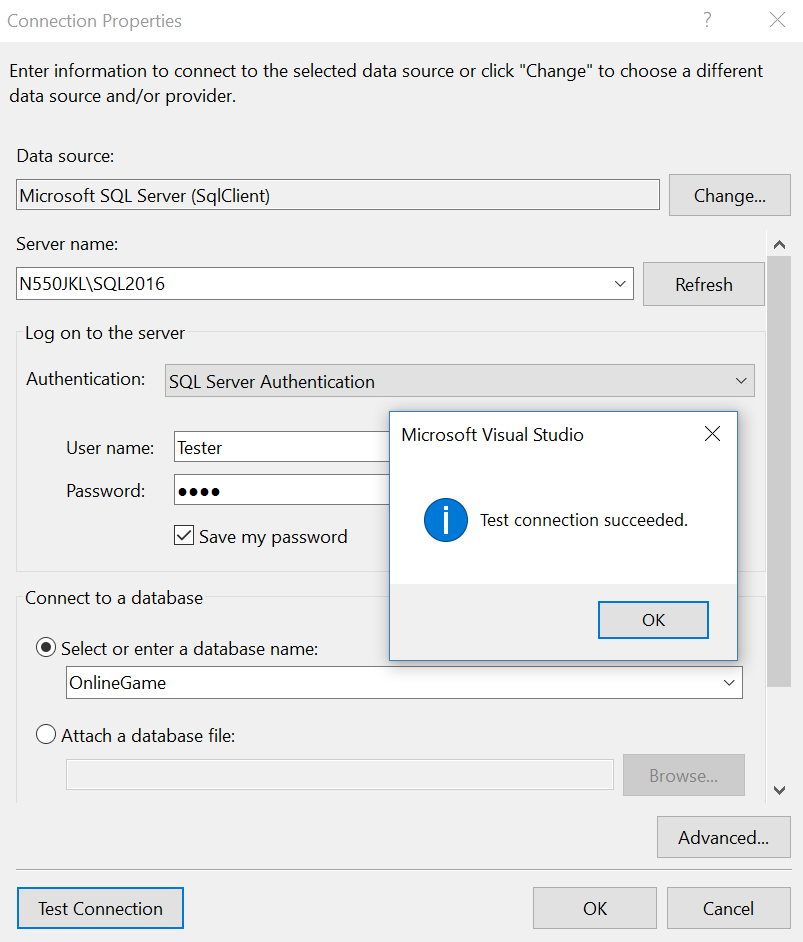
Save Connection settings in Web.Config as:

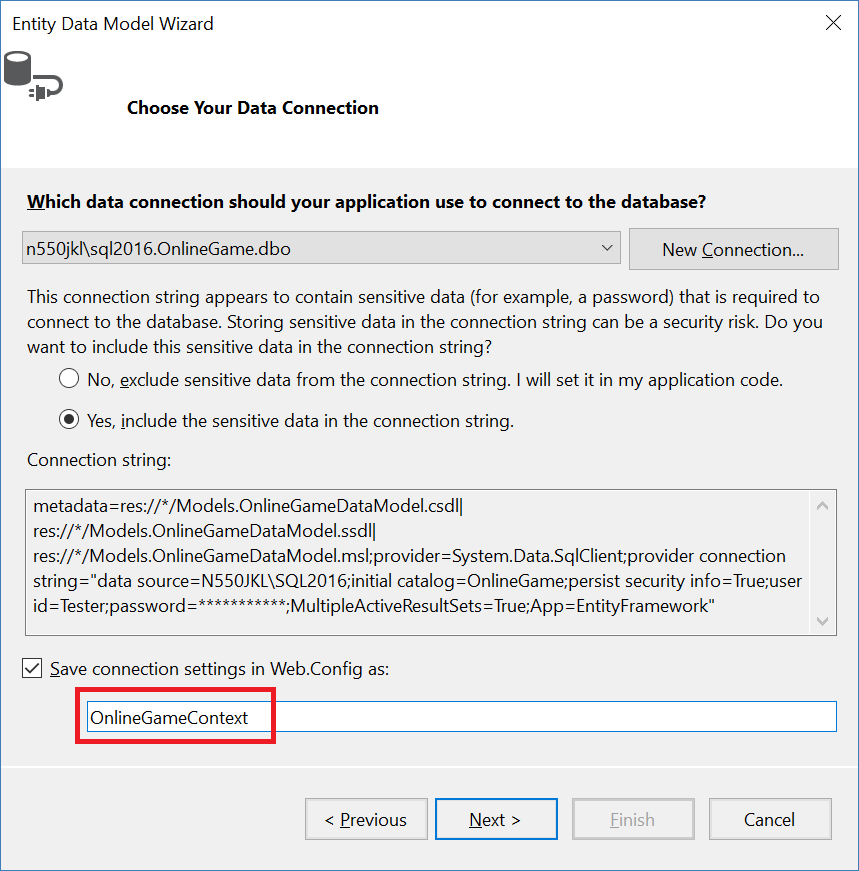
**OnlineGameContext**

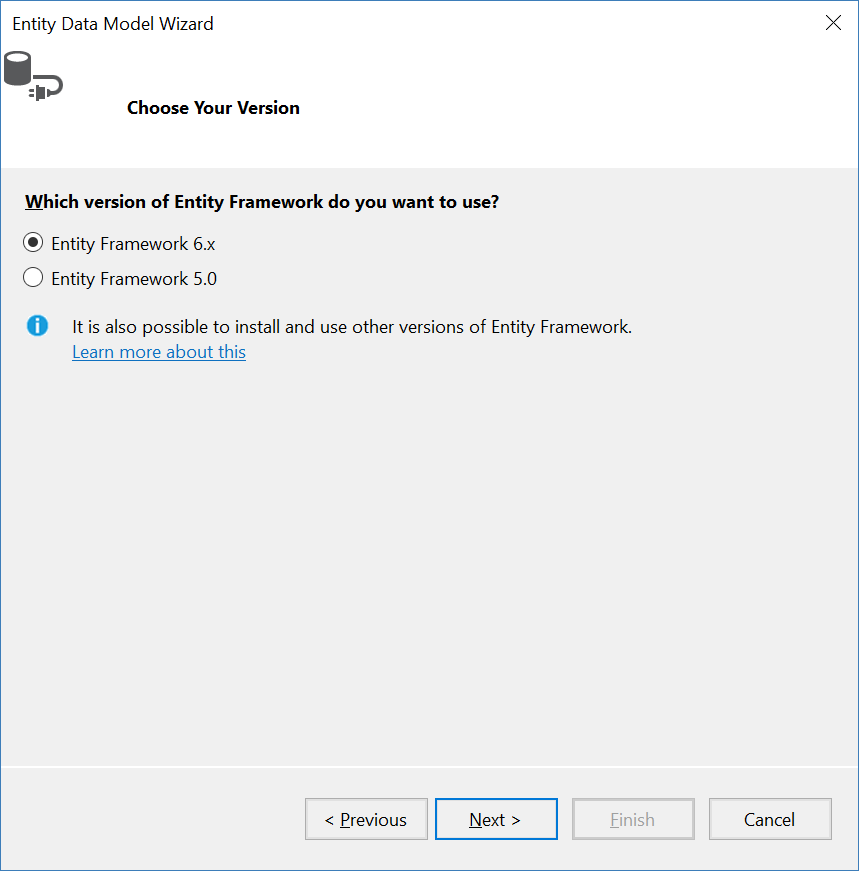


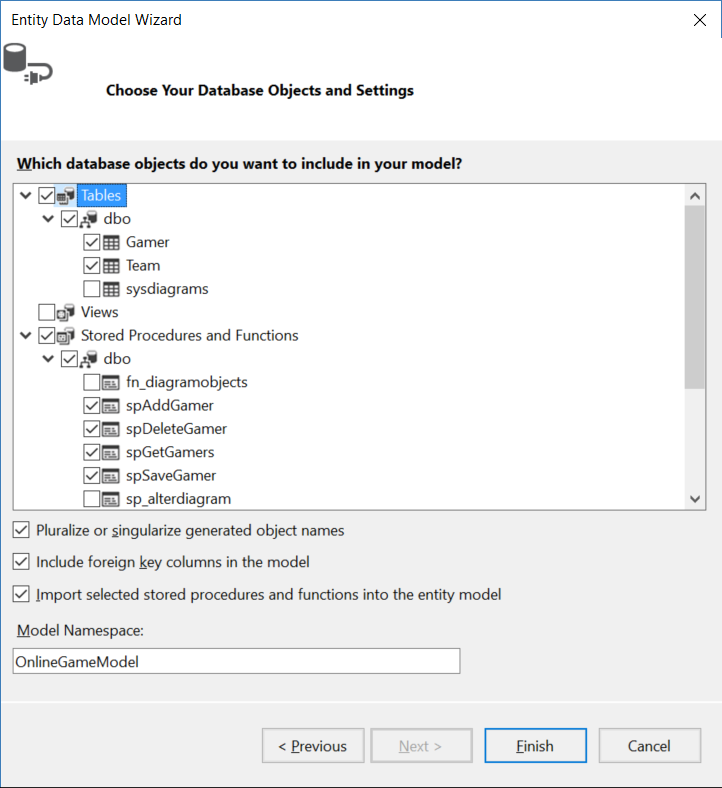


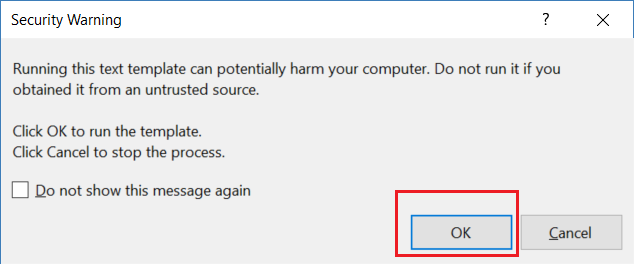


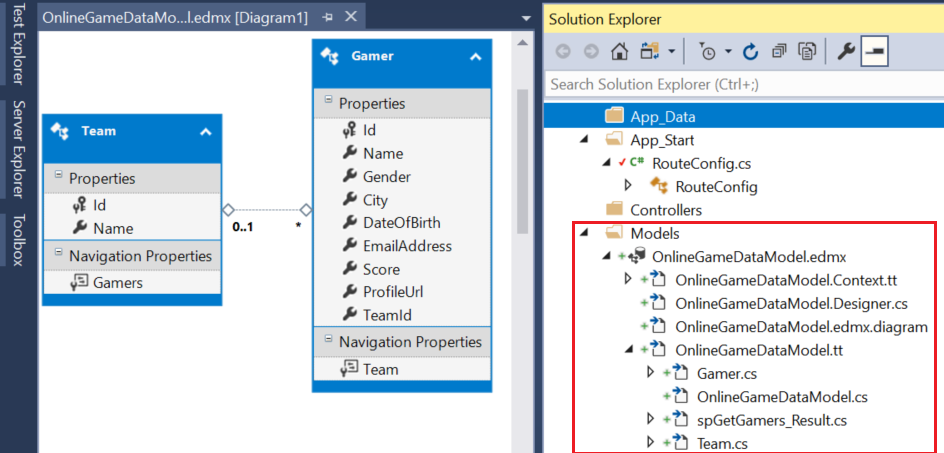












3.3. Update Database

--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

--Drop Stored Procedure if it exists.

--IF OBJECT\_ID('spSearchGamer') IS NOT NULL

IF ( EXISTS ( SELECT    \*

              FROM      INFORMATION\_SCHEMA.ROUTINES

              WHERE     ROUTINE\_TYPE = 'PROCEDURE'

                        AND LEFT(ROUTINE\_NAME, 3) NOT IN ( 'sp\_', 'xp\_', 'ms\_' )

                        AND SPECIFIC\_NAME = 'spGetGamers' ) )

    BEGIN

        DROP PROCEDURE spGetGamers;

    END;

GO -- Run the previous command and begins new batch

IF ( EXISTS ( SELECT    \*

              FROM      INFORMATION\_SCHEMA.ROUTINES

              WHERE     ROUTINE\_TYPE = 'PROCEDURE'

                        AND LEFT(ROUTINE\_NAME, 3) NOT IN ( 'sp\_', 'xp\_', 'ms\_' )

                        AND SPECIFIC\_NAME = 'spAddGamer' ) )

    BEGIN

        DROP PROCEDURE spAddGamer;

    END;

GO -- Run the previous command and begins new batch

IF ( EXISTS ( SELECT    \*

              FROM      INFORMATION\_SCHEMA.ROUTINES

              WHERE     ROUTINE\_TYPE = 'PROCEDURE'

                        AND LEFT(ROUTINE\_NAME, 3) NOT IN ( 'sp\_', 'xp\_', 'ms\_' )

                        AND SPECIFIC\_NAME = 'spSaveGamer' ) )

    BEGIN

        DROP PROCEDURE spSaveGamer;

    END;

GO -- Run the previous command and begins new batch

IF ( EXISTS ( SELECT    \*

              FROM      INFORMATION\_SCHEMA.ROUTINES

              WHERE     ROUTINE\_TYPE = 'PROCEDURE'

                        AND LEFT(ROUTINE\_NAME, 3) NOT IN ( 'sp\_', 'xp\_', 'ms\_' )

                        AND SPECIFIC\_NAME = 'spDeleteGamer' ) )

    BEGIN

        DROP PROCEDURE spDeleteGamer;

    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) 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) NULL ,

      Gender NVARCHAR(10) NULL ,

      City NVARCHAR(50) NULL ,

      DateOfBirth DATETIME NULL ,

      EmailAddress NVARCHAR(100) ,

      Score INT ,

      ProfileUrl NVARCHAR(100) ,

      GameMoney INT ,

      RolePhoto NVARCHAR(100) ,

      RolePhotoAltText NVARCHAR(100) ,

      TeamId INT FOREIGN KEY REFERENCES Team ( Id )

    );

GO -- Run the previous command and begins new batch

--3. Insert Data

INSERT  Team

VALUES  ( N'Team1' );

INSERT  Team

VALUES  ( N'Team2' );

INSERT  Team

VALUES  ( N'Team3' );

GO -- Run the previous command and begins new batch

INSERT  Gamer

VALUES  ( N'Name01 ABB', N'Male', N'City01', '1979/4/28', '[1@AAA.com](mailto:1@AAA.com)', 3500,

          '<https://ithandyguytutorial.blogspot.com.au/>', 1000,

          '~/Photos/Name01.png', 'Name01RolePhoto', 1 );

INSERT  Gamer

VALUES  ( N'Name02 CDDE', N'Female', N'City03', '1981/7/24', '[2@BBB.com](mailto:2@BBB.com)', 3500,

          '<https://ithandyguytutorial.blogspot.com.au/>', 1500,

          '~/Photos/Name02.png', 'Name02RolePhoto', 2 );

INSERT  Gamer

VALUES  ( N'Name03 FIJK', N'Female', N'City01', '1984/12/5', '[3@CCCC.com](mailto:3@CCCC.com)',

          3500, '<https://ithandyguytutorial.blogspot.com.au/>', 4000,

          '~/Photos/Name03.png', 'Name03RolePhoto', 3 );

INSERT  Gamer

VALUES  ( N'Name04 LMOPPQ', N'Male', N'City02', '1983/5/29', '[4@DD.com](mailto:4@DD.com)', 3500,

          '<https://ithandyguytutorial.blogspot.com.au/>', 2500,

          '~/Photos/Name04.png', 'Name04RolePhoto', 1 );

INSERT  Gamer

VALUES  ( N'Name05 QRSTT', N'Male', N'City01', '1979/6/20', '[5@EEE.com](mailto:5@EEE.com)', 3500,

          '<https://ithandyguytutorial.blogspot.com.au/>', 3500,

          '~/Photos/Name05.png', 'Name05RolePhoto', 3 );

INSERT  Gamer

VALUES  ( N'Name06 TUVVX', N'Female', N'City03', '1984/5/15', '[6@FF.com](mailto:6@FF.com)', 3500,

          '<https://ithandyguytutorial.blogspot.com.au/>', 2500,

          '~/Photos/Name06.png', 'Name06RolePhoto', 3 );

INSERT  Gamer

VALUES  ( N'Name07 XYZZXX', N'Female', N'City01', '1986/4/29', '[7@GGGG.com](mailto:7@GGGG.com)',

          3500, '<https://ithandyguytutorial.blogspot.com.au/>', 4550,

          '~/Photos/Name07.png', 'Name07RolePhoto', 2 );

INSERT  Gamer

VALUES  ( N'Name08 ABBCDE', N'Male', N'City02', '1985/7/28', '[8@HH.com](mailto:8@HH.com)', 3500,

          '<https://ithandyguytutorial.blogspot.com.au/>', 3550,

          '~/Photos/Name08.png', 'Name08RolePhoto', 1 );

INSERT  Gamer

VALUES  ( N'Name09 QRSTTUVXX', N'Male', N'City02', '1983/4/16', '[9@IIII.com](mailto:9@IIII.com)',

          3500, '<https://ithandyguytutorial.blogspot.com.au/>', 2510,

          '~/Photos/Name09.png', 'Name09RolePhoto', 1 );

GO -- Run the previous command and begins new batch

--4. SP

CREATE PROCEDURE spGetGamers

AS

    BEGIN

        SELECT  \*

        FROM    Gamer;

    END;

GO -- Run the previous command and begins new batch

CREATE PROCEDURE spAddGamer

    (

      @Name NVARCHAR(50) ,

      @Gender NVARCHAR(10) ,

      @City NVARCHAR(50) ,

      @DateOfBirth DateTime ,

      @EmailAddress NVARCHAR(100) ,

      @Score INT ,

      @ProfileUrl NVARCHAR(100) ,

      @GameMoney INT ,

      @TeamId INT

    )

AS

    BEGIN

        INSERT  INTO Gamer

        VALUES  ( @Name, @Gender, @City, @DateOfBirth, @EmailAddress, @Score,

                  @ProfileUrl, @GameMoney, @TeamId );

    END;

GO -- Run the previous command and begins new batch

CREATE PROCEDURE spSaveGamer

    (

      @Id INT ,

      @Name NVARCHAR(50) ,

      @Gender NVARCHAR(10) ,

      @City NVARCHAR(50) ,

      @DateOfBirth DateTime ,

      @EmailAddress NVARCHAR(100) ,

      @Score INT ,

      @ProfileUrl NVARCHAR(100) ,

      @GameMoney INT ,

      @TeamId INT

    )

AS

    BEGIN

        UPDATE  dbo.Gamer

        SET     Name = @Name ,

                Gender = @Gender ,

                City = @City ,

                DateOfBirth = @DateOfBirth ,

                EmailAddress = @EmailAddress ,

                Score = @Score ,

                ProfileUrl = @ProfileUrl ,

                GameMoney = @GameMoney ,

                TeamId = @TeamId

        WHERE   Id = @Id;

    END;

GO -- Run the previous command and begins new batch

CREATE PROCEDURE spDeleteGamer ( @Id int )

AS

    BEGIN

        DELETE  FROM Gamer

        WHERE   Id = @Id;

    END;

GO -- Run the previous command and begins new batch

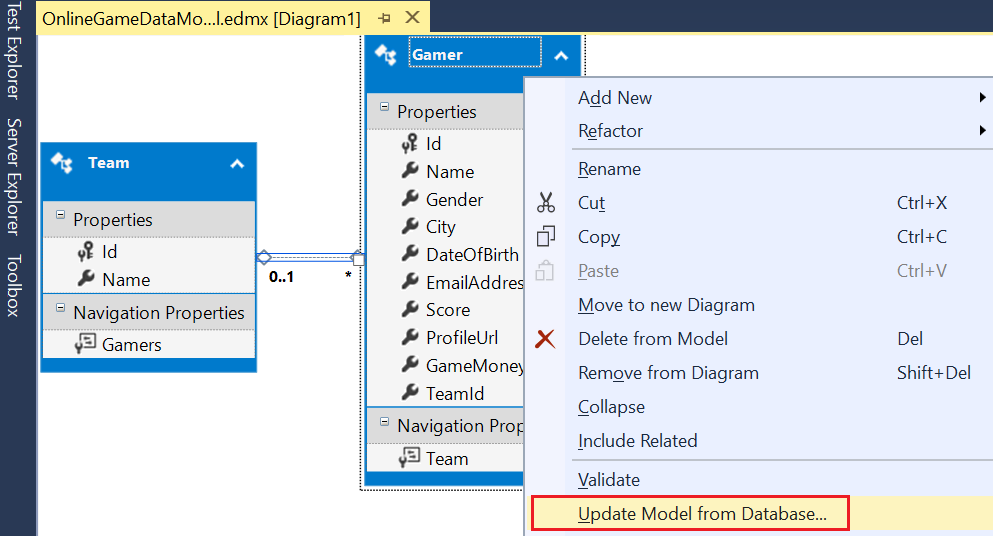
--EXEC spGetGamers

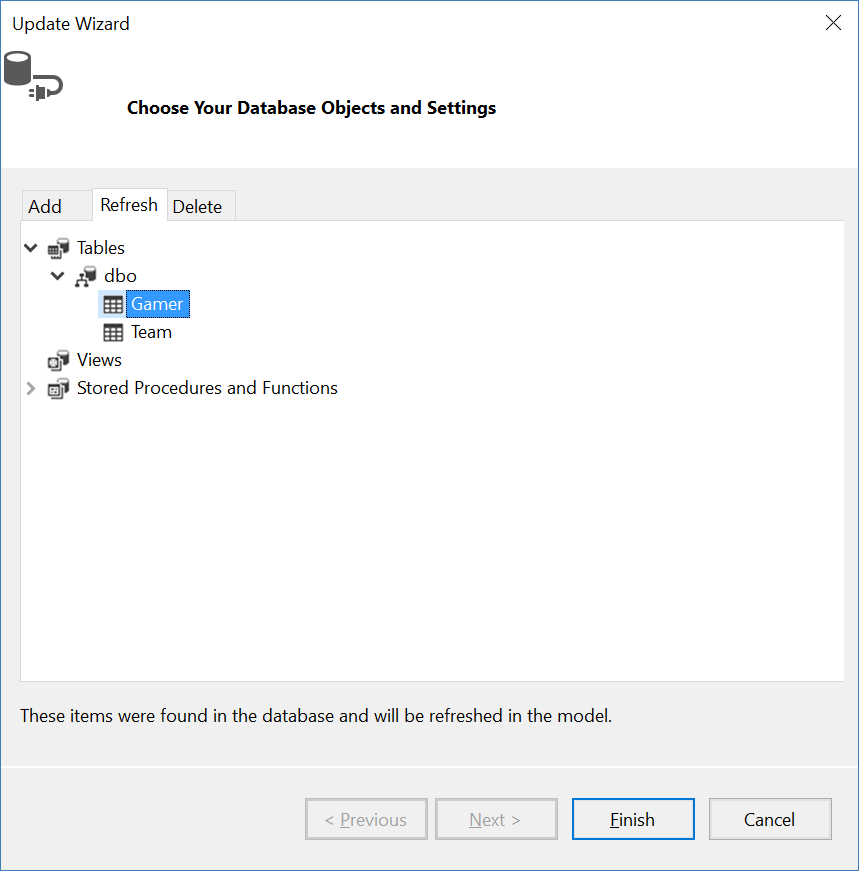
--GO -- Run the previous command and begins new batch

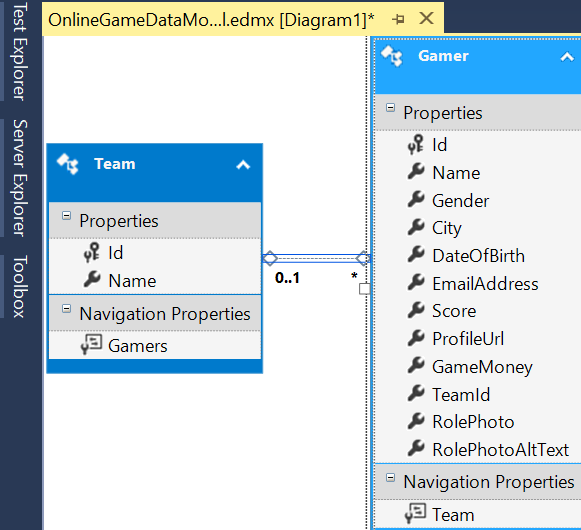
3.4. Update Entity Framework

In Edmx,

Object --> Right Click --> Update Model from Database -->







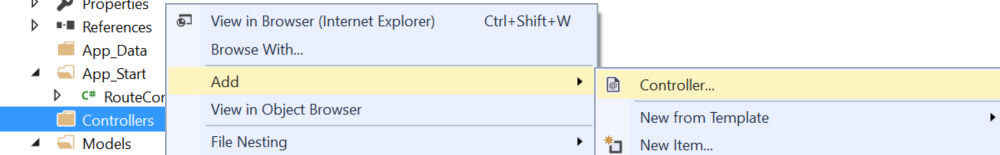
4. OnlineGame.Web

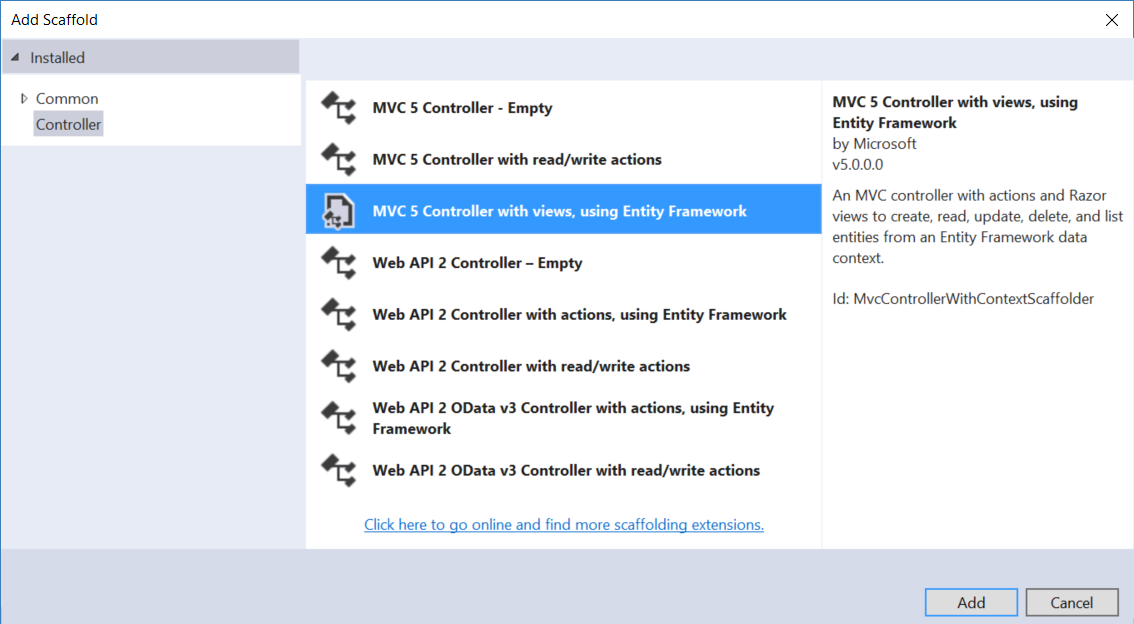
4.1. Controllers/GamersController.cs

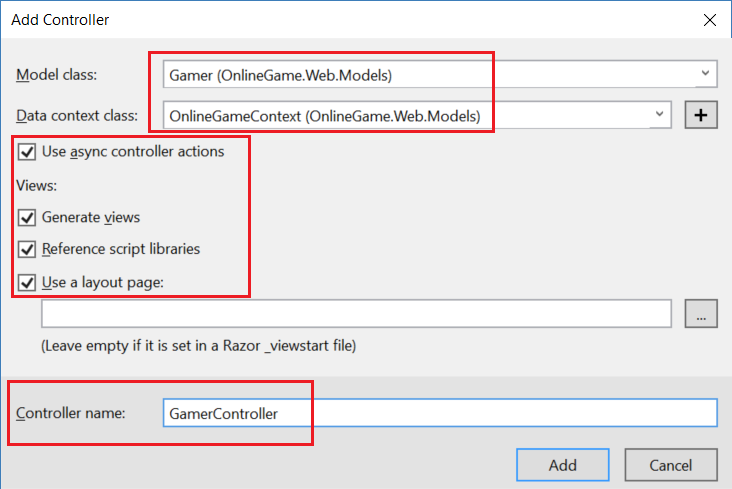
Controllers --> Right click --> Add --> Controller

-->

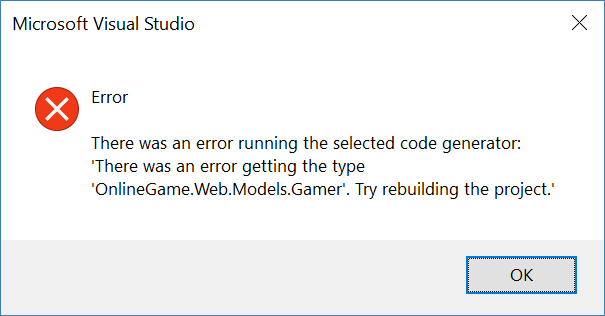
**MVC 5 Controller with views, using Entity Framework**



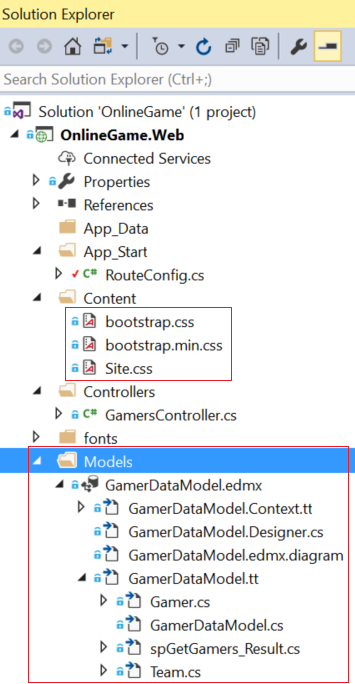


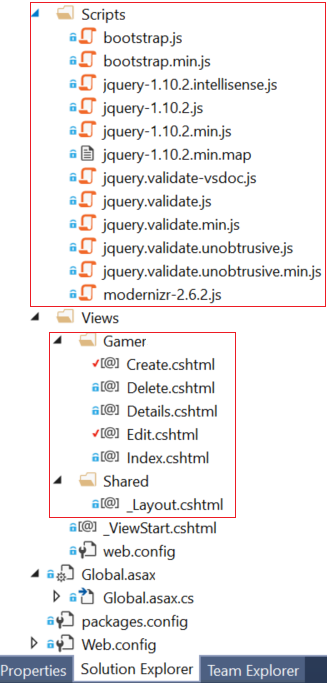


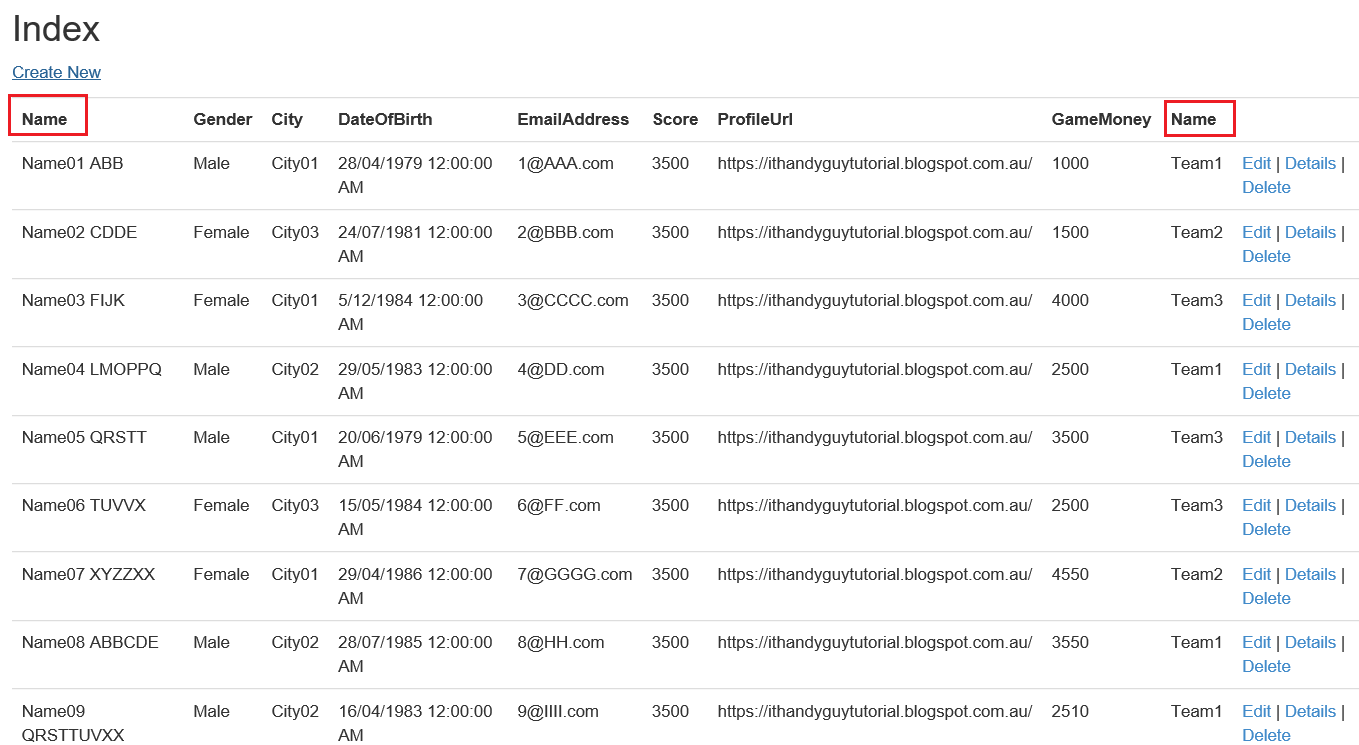
If you see the following error message, then you have to re-build solution before you create the controller.



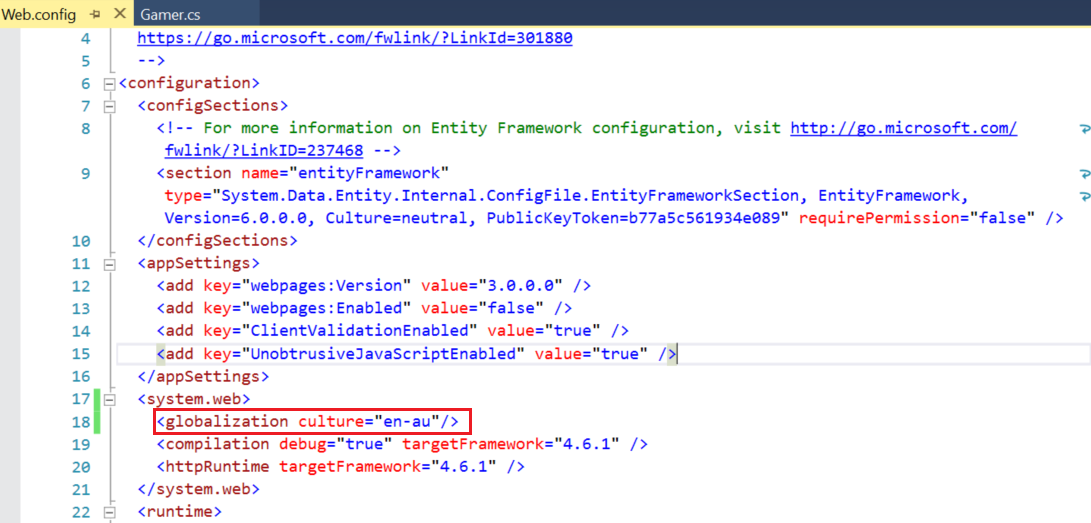
It will automatically generate the controller, views, and several javascript and css files.







4.2. web.config



  <system.web>

    <globalization culture="en-au"/>

4.3. Add Photos

Graphical user interface, application, table

Description automatically generated with medium confidence

4.4. Add Photos

@model OnlineGame.Web.Models.Gamer

@{

    ViewBag.Title = "Details";

}

<h2>Details</h2>

<div>

    <h4>Gamer</h4>

    <hr />

    <dl class="dl-horizontal">

        <dt>

            @Html.DisplayNameFor(model => model.Name)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.Name)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.Gender)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.Gender)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.City)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.City)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.DateOfBirth)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.DateOfBirth)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.EmailAddress)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.EmailAddress)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.Score)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.Score)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.ProfileUrl)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.ProfileUrl)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.GameMoney)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.GameMoney)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.RolePhoto)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.RolePhoto)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.RolePhotoAltText)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.RolePhotoAltText)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.RolePhoto)

        </dt>

        <dd>

            <img src="@Url.Content(Model.RolePhoto)" alt="@Model.RolePhotoAltText" />

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.Team.Name)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.Team.Name)

        </dd>

    </dl>

</div>

<p>

    @Html.ActionLink("Edit", "Edit", new { id = Model.Id }) |

    @Html.ActionLink("Back to List", "Index")

</p>

Graphical user interface

Description automatically generated with medium confidence

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

5. OnlineGame.Web

5.1. CustomHtmlHelper/CustomHtmlHelper.cs

using System.Web;

using System.Web.Mvc;

namespace OnlineGame.Web.CustomHtmlHelper

{

    public static class CustomHtmlHelper

    {

        public static IHtmlString Image(this HtmlHelper customHtmlHelper, string src, string alt)

        {

            // Create <img> tag

            TagBuilder tb = new TagBuilder("img");

            // Add src attribute

            tb.Attributes.Add("src", VirtualPathUtility.ToAbsolute(src));

            // Add alt attribute

            tb.Attributes.Add("alt", alt);

            // return MvcHtmlString object which implements IHtmlString interface.

            return new MvcHtmlString(tb.ToString(TagRenderMode.SelfClosing));

        }

    }

}

/\*

1.

Create Custom Html Helper

1.1.

Html helper is an extension method,

so an extension method needs to be a static method in a static class.

The first parameter must have this keyword represents the calling object.

In this case, "this System.Web.Mvc.HtmlHelper customHtmlHelper"

1.2.

Use TagBuilder to create HTML tag.

1.3.

Return MvcHtmlString object which implements IHtmlString interface.

1.4.

The view which uses this Html helper needs to "using this namespace".

In this case, "Using OnlineGame.Web.CustomHtmlHelper"

If you want this HTML helper is available in all views,

You need to include this namespace in Views/web.config file.

E.g.

//<system.web.webPages.razor>

//<host factoryType = "System.Web.Mvc.MvcWebRazorHostFactory, System.Web.Mvc, Version=5.2.3.0, Culture=neutral, PublicKeyToken=31BF3856AD364E35" />

//< pages pageBaseType="System.Web.Mvc.WebViewPage">

//<namespaces>

//    <add namespace="System.Web.Mvc" />

//    <add namespace="System.Web.Mvc.Ajax" />

//    <add namespace="System.Web.Mvc.Html" />

//    <add namespace="System.Web.Routing" />

//    <add namespace="OnlineGame.Web" />

//    <add namespace="OnlineGame.Web.CustomHtmlHelper" />

//</namespaces>

//</pages>

//</system.web.webPages.razor>

\*/

5.2. Views/web.config

<?xml version="1.0"?>

<configuration>

  <configSections>

    <sectionGroup name="system.web.webPages.razor" type="System.Web.WebPages.Razor.Configuration.RazorWebSectionGroup, System.Web.WebPages.Razor, Version=3.0.0.0, Culture=neutral, PublicKeyToken=31BF3856AD364E35">

      <section name="host" type="System.Web.WebPages.Razor.Configuration.HostSection, System.Web.WebPages.Razor, Version=3.0.0.0, Culture=neutral, PublicKeyToken=31BF3856AD364E35" requirePermission="false" />

      <section name="pages" type="System.Web.WebPages.Razor.Configuration.RazorPagesSection, System.Web.WebPages.Razor, Version=3.0.0.0, Culture=neutral, PublicKeyToken=31BF3856AD364E35" requirePermission="false" />

    </sectionGroup>

  </configSections>

  <system.web.webPages.razor>

    <host factoryType="System.Web.Mvc.MvcWebRazorHostFactory, System.Web.Mvc, Version=5.2.3.0, Culture=neutral, PublicKeyToken=31BF3856AD364E35" />

    <pages pageBaseType="System.Web.Mvc.WebViewPage">

      <namespaces>

        <add namespace="System.Web.Mvc" />

        <add namespace="System.Web.Mvc.Ajax" />

        <add namespace="System.Web.Mvc.Html" />

        <add namespace="System.Web.Routing" />

        <add namespace="OnlineGame.Web" />

        <add namespace="OnlineGame.Web.CustomHtmlHelper" />

      </namespaces>

    </pages>

  </system.web.webPages.razor>

  <appSettings>

    <add key="webpages:Enabled" value="false" />

  </appSettings>

  <system.webServer>

    <handlers>

      <remove name="BlockViewHandler"/>

      <add name="BlockViewHandler" path="\*" verb="\*" preCondition="integratedMode" type="System.Web.HttpNotFoundHandler" />

    </handlers>

  </system.webServer>

  <system.web>

    <compilation>

      <assemblies>

        <add assembly="System.Web.Mvc, Version=5.2.3.0, Culture=neutral, PublicKeyToken=31BF3856AD364E35" />

      </assemblies>

    </compilation>

  </system.web>

</configuration>

5.3. Views/Gamer/Details.cshtml

@\*@using OnlineGame.Web.CustomHtmlHelper\*@

@model OnlineGame.Web.Models.Gamer

@{

    ViewBag.Title = "Details";

}

<h2>Details</h2>

<div>

    <h4>Gamer</h4>

    <hr />

    <dl class="dl-horizontal">

        <dt>

            @Html.DisplayNameFor(model => model.Name)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.Name)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.Gender)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.Gender)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.City)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.City)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.DateOfBirth)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.DateOfBirth)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.EmailAddress)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.EmailAddress)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.Score)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.Score)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.ProfileUrl)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.ProfileUrl)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.GameMoney)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.GameMoney)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.RolePhoto)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.RolePhoto)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.RolePhotoAltText)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.RolePhotoAltText)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.RolePhoto)

        </dt>

        <dd>

            <img src="@Url.Content(Model.RolePhoto)" alt="@Model.RolePhotoAltText" /><br />

            @Html.Image(@Url.Content(Model.RolePhoto), @Model.RolePhotoAltText)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.Team.Name)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.Team.Name)

        </dd>

    </dl>

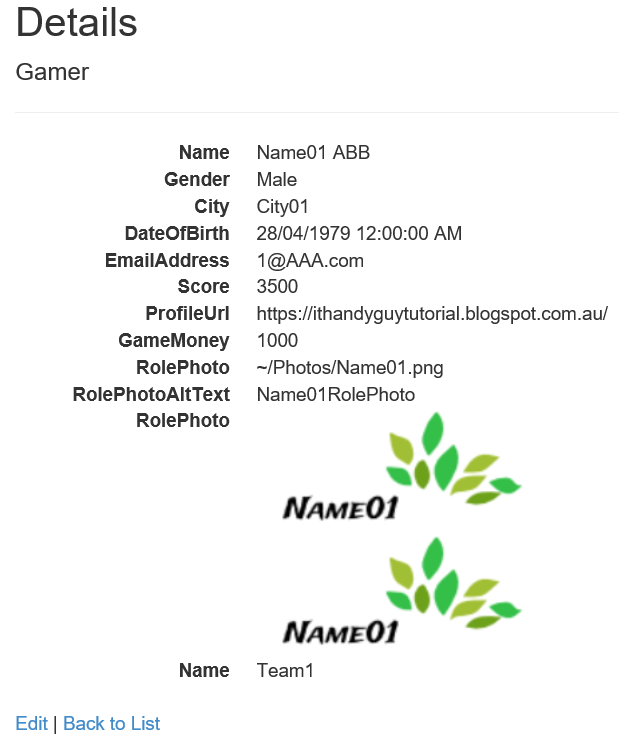
</div>

<p>

    @Html.ActionLink("Edit", "Edit", new { id = Model.Id }) |

    @Html.ActionLink("Back to List", "Index")

</p>



6. HTML encoding

Html encoding characters in mvc can replace ASCII characters to avoid cross-site scripting attacks.

Reference:

<https://www.w3schools.com/html/html_charset.asp>

For example, Replace the following ASCII characters by Html encoding

ASCII characters      Html encoding

<                         &lt;

>                         &gt;

&                         &amp

Single Quote '       &#039;

Double Quote "     &quot;

Using **@Html.Raw("HtmlString")** or using **new IHtmlString("HtmlString")**

can disable automatic html encoding and return the markup.

Previously, we return an **IHtmlString** in our custom html helper.

In this part, we will use **@Html.Raw("HtmlString")**

6.1. CustomHtmlHelper/CustomHtmlHelper.cs

using System.Web;

using System.Web.Mvc;

namespace OnlineGame.Web.CustomHtmlHelper

{

    public static class CustomHtmlHelper

    {

        public static IHtmlString Image(this HtmlHelper customHtmlHelper, string src, string alt)

        {

            // Create <img> tag

            TagBuilder tb = new TagBuilder("img");

            // Add src attribute

            tb.Attributes.Add("src", VirtualPathUtility.ToAbsolute(src));

            // Add alt attribute

            tb.Attributes.Add("alt", alt);

            // return MvcHtmlString object which implements IHtmlString interface.

            return new MvcHtmlString(tb.ToString(TagRenderMode.SelfClosing));

        }

        public static string ImageString(this HtmlHelper customHtmlHelper, string src, string alt)

        {

            // Create <img> tag

            TagBuilder tb = new TagBuilder("img");

            // Add src attribute

            tb.Attributes.Add("src", VirtualPathUtility.ToAbsolute(src));

            // Add alt attribute

            tb.Attributes.Add("alt", alt);

            // return MvcHtmlString object which implements IHtmlString interface.

            return tb.ToString(TagRenderMode.SelfClosing);

        }

    }

}

/\*

1.

Create Custom Html Helper

1.1.

Html helper is an extension methods,

so a extension method need to be static method in a static calss.

The first parameter must has this keyword represents the calling object.

In this case, "this System.Web.Mvc.HtmlHelper customHtmlHelper"

1.2.

Use TagBuilder to create HTML tag.

1.3.

Return MvcHtmlString object which implements IHtmlString interface.

1.4.

The view which uses this Html helper need to "using this namespace".

In this case, "Using OnlineGame.Web.CustomHtmlHelper"

If you want this HTML helper is available in all views,

You need to include this namespace in Views/web.config file.

E.g.

//<system.web.webPages.razor>

//<host factoryType = "System.Web.Mvc.MvcWebRazorHostFactory, System.Web.Mvc, Version=5.2.3.0, Culture=neutral, PublicKeyToken=31BF3856AD364E35" />

//< pages pageBaseType="System.Web.Mvc.WebViewPage">

//<namespaces>

//    <add namespace="System.Web.Mvc" />

//    <add namespace="System.Web.Mvc.Ajax" />

//    <add namespace="System.Web.Mvc.Html" />

//    <add namespace="System.Web.Routing" />

//    <add namespace="OnlineGame.Web" />

//    <add namespace="OnlineGame.Web.CustomHtmlHelper" />

//</namespaces>

//</pages>

//</system.web.webPages.razor>

\*/

6.2. Views/Gamer/Details.cshtml

@\*@using OnlineGame.Web.CustomHtmlHelper\*@

@model OnlineGame.Web.Models.Gamer

@{

    ViewBag.Title = "Details";

}

<h2>Details</h2>

<div>

    <h4>Gamer</h4>

    <hr />

    <dl class="dl-horizontal">

        <dt>

            @Html.DisplayNameFor(model => model.Name)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.Name)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.Gender)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.Gender)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.City)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.City)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.DateOfBirth)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.DateOfBirth)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.EmailAddress)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.EmailAddress)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.Score)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.Score)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.ProfileUrl)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.ProfileUrl)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.GameMoney)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.GameMoney)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.RolePhoto)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.RolePhoto)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.RolePhotoAltText)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.RolePhotoAltText)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.RolePhoto)

        </dt>

        <dd>

            <img src="@Url.Content(Model.RolePhoto)" alt="@Model.RolePhotoAltText" /><br />

            @Html.Image(Url.Content(Model.RolePhoto), Model.RolePhotoAltText)<br />

            @Html.ImageString(Url.Content(Model.RolePhoto), Model.RolePhotoAltText)<br />

            @\*It will return HTML encoding.

            E.g. <img src="XXX.png" alt="XXX" />\*@

            @Html.Raw(Html.ImageString(Url.Content(Model.RolePhoto), Model.RolePhotoAltText))<br />

            @\*Html.Raw will disable Html Code and return the markup, in this case, return image\*@

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.Team.Name)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.Team.Name)

        </dd>

    </dl>

</div>

<p>

    @Html.ActionLink("Edit", "Edit", new { id = Model.Id }) |

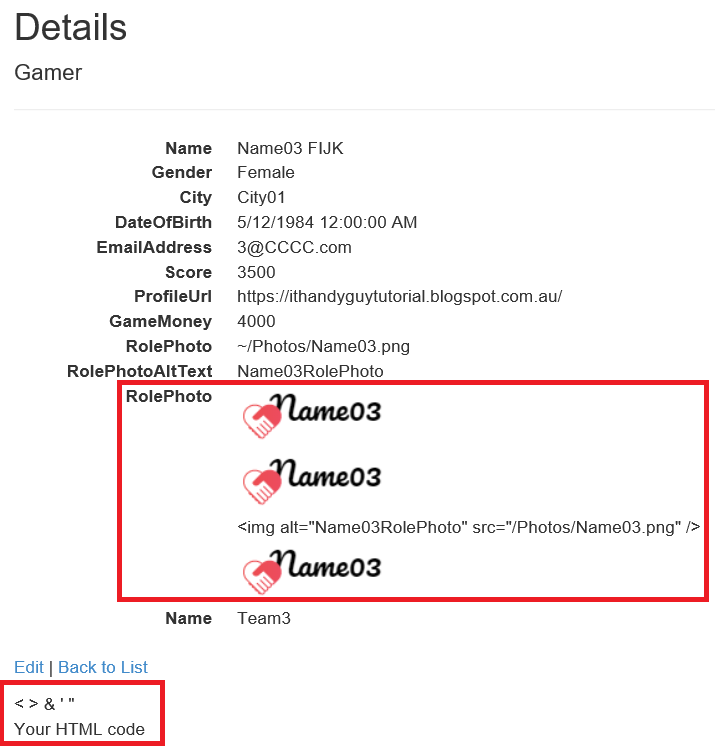
    @Html.ActionLink("Back to List", "Index")

</p>

<div>

    @Html.Raw("&lt; &gt; &amp &#039; &quot; <div>Your HTML code</div>")

</div>



7. Strongly Typed Views

7.1. Controllers/GamerController.cs

using System.Data.Entity;

using System.Linq;

using System.Threading.Tasks;

using[System.Net](http://system.net/);

using System.Web.Mvc;

using OnlineGame.Web.Models;

namespace OnlineGame.Web.Controllers

{

    public class GamerController : Controller

    {

        private OnlineGameContext db = new OnlineGameContext();

        // 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/Details2/5

        [HttpGet]

        public async Task<ActionResult> Details2(int? id)

        {

            if (id == null)

            {

                return new HttpStatusCodeResult(HttpStatusCode.BadRequest);

            }

            Gamer gamer = await db.Gamers.FindAsync(id);

            if (gamer == null)

            {

                return HttpNotFound();

            }

            ViewBag.GamerData = gamer;

            return View();

            //return View(gamer);

        }

        // GET: Gamer/Details3/5

        [HttpGet]

        public async Task<ActionResult> Details3(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/Details4/5

        [HttpGet]

        public async Task<ActionResult> Details4(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,Score,ProfileUrl,GameMoney,TeamId,RolePhoto,RolePhotoAltText")] Gamer gamer)

        {

            if (ModelState.IsValid)

            {

                db.Gamers.Add(gamer);

                await db.SaveChangesAsync();

                return RedirectToAction("Index");

            }

            ViewBag.TeamId = new SelectList(db.Teams, "Id", "Name", gamer.TeamId);

            return View(gamer);

        }

        // 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();

            }

            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,Score,ProfileUrl,GameMoney,TeamId,RolePhoto,RolePhotoAltText")] Gamer gamer)

        {

            if (ModelState.IsValid)

            {

                db.Entry(gamer).State = EntityState.Modified;

                await db.SaveChangesAsync();

                return RedirectToAction("Index");

            }

            ViewBag.TeamId = new SelectList(db.Teams, "Id", "Name", gamer.TeamId);

            return View(gamer);

        }

        // 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();

            }

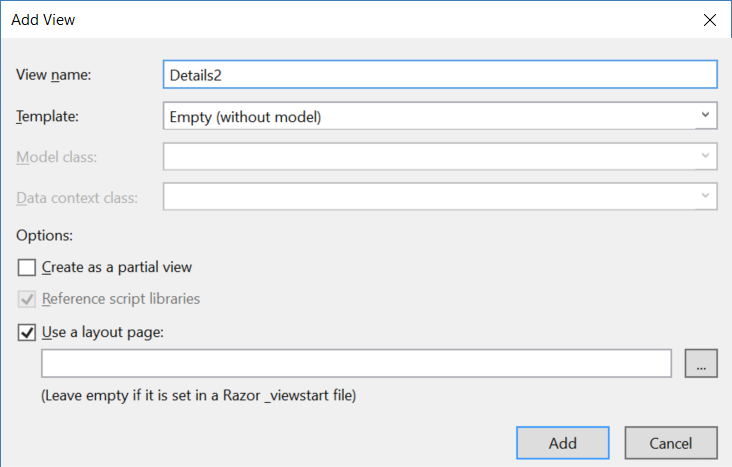
            base.Dispose(disposing);

        }

    }

}

7.2. Views/Gamer/Details2.cshtml



@{

    ViewBag.Title = "Details2";

}

<h2>Details2</h2>

@Html.DisplayName("Name")

<br />

@ViewBag.GamerData.Name

<br />

@Html.DisplayName("Gender")

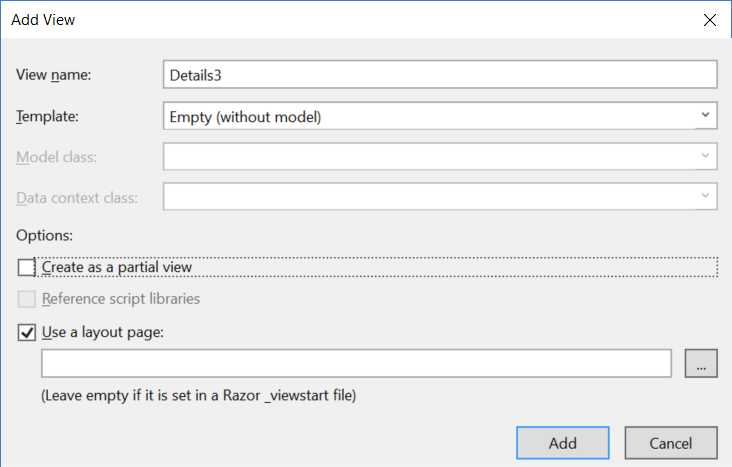
<br />

@ViewBag.GamerData.Gender

Graphical user interface, text

Description automatically generated with medium confidence

7.3. Views/Gamer/Details3.cshtml



@model dynamic

@{

    ViewBag.Title = "Details3";

}

<h2>Details3</h2>

@Html.DisplayName("Name")

<br />

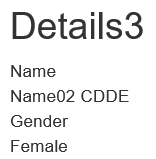
@Model.Name

<br />

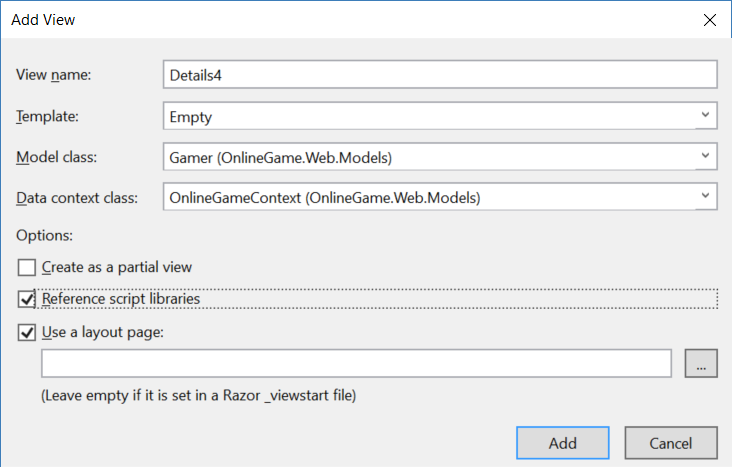
@Html.DisplayName("Gender")

<br />

@Model.Gender



7.4. Views/Gamer/Details4.cshtml



@model OnlineGame.Web.Models.Gamer

@{

    ViewBag.Title = "Details4";

}

<h2>Details4</h2>

@Html.DisplayName("Name")

<br />

@Model.Name

<br />

@Html.DisplayName("Gender")

<br />

@Model.Gender

@\*

Using Strongly Typed View provide intellisense

\*@

Graphical user interface, text, application

Description automatically generated

8. Partial View

Mvc partial views are similar to web form application user controls.

Mvc partial views can be included in several normal views.

If we update mvc partial view, then it will apply to all views which include the partial view.

Partial View name prefix is "\_".

E.g. **\_Gamer.cshtml**

8.1. Controllers/GamerController.cs

using System.Data.Entity;

using System.Linq;

using System.Threading.Tasks;

using[System.Net](http://system.net/);

using System.Web.Mvc;

using OnlineGame.Web.Models;

namespace OnlineGame.Web.Controllers

{

    public class GamerController : Controller

    {

        private OnlineGameContext db = new OnlineGameContext();

        // GET: Gamer

        [HttpGet]

        public async Task<ActionResult> Index()

        {

            IQueryable<Gamer> gamers = db.Gamers.Include(g => g.Team);

            return View(await gamers.ToListAsync());

        }

        // GET: Gamer

        [HttpGet]

        public async Task<ActionResult> Index2()

        {

            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/Details2/5

        [HttpGet]

        public async Task<ActionResult> Details2(int? id)

        {

            if (id == null)

            {

                return new HttpStatusCodeResult(HttpStatusCode.BadRequest);

            }

            Gamer gamer = await db.Gamers.FindAsync(id);

            if (gamer == null)

            {

                return HttpNotFound();

            }

            ViewBag.GamerData = gamer;

            return View();

            //return View(gamer);

        }

        // GET: Gamer/Details3/5

        [HttpGet]

        public async Task<ActionResult> Details3(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/Details4/5

        [HttpGet]

        public async Task<ActionResult> Details4(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,Score,ProfileUrl,GameMoney,TeamId,RolePhoto,RolePhotoAltText")] Gamer gamer)

        {

            if (ModelState.IsValid)

            {

                db.Gamers.Add(gamer);

                await db.SaveChangesAsync();

                return RedirectToAction("Index");

            }

            ViewBag.TeamId = new SelectList(db.Teams, "Id", "Name", gamer.TeamId);

            return View(gamer);

        }

        // 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();

            }

            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,Score,ProfileUrl,GameMoney,TeamId,RolePhoto,RolePhotoAltText")] Gamer gamer)

        {

            if (ModelState.IsValid)

            {

                db.Entry(gamer).State = EntityState.Modified;

                await db.SaveChangesAsync();

                return RedirectToAction("Index");

            }

            ViewBag.TeamId = new SelectList(db.Teams, "Id", "Name", gamer.TeamId);

            return View(gamer);

        }

        // 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);

        }

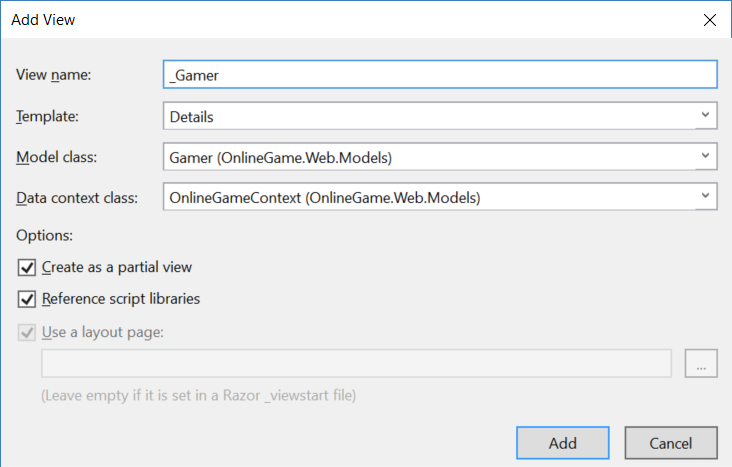
    }

}

8.2. Views/Shared/\_Gamer.cshtml (Partial View)

Partial View name prefix is "\_".

E.g. **\_Gamer.cshtml**



@model OnlineGame.Web.Models.Gamer

<div>

    <h4>Gamer</h4>

    <hr />

    <dl class="dl-horizontal">

        <dt>

            @Html.DisplayNameFor(model => model.Name)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.Name)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.Gender)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.Gender)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.City)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.City)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.DateOfBirth)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.DateOfBirth)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.EmailAddress)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.EmailAddress)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.Score)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.Score)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.ProfileUrl)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.ProfileUrl)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.GameMoney)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.GameMoney)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.RolePhoto)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.RolePhoto)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.RolePhotoAltText)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.RolePhotoAltText)

        </dd>

        <dt>

            @Html.DisplayNameFor(model => model.Team.Name)

        </dt>

        <dd>

            @Html.DisplayFor(model => model.Team.Name)

        </dd>

    </dl>

</div>

<p>

    @Html.ActionLink("Edit", "Edit", new { id = Model.Id }) |

    @Html.ActionLink("Back to List", "Index")

</p>

8.3. Views/Gamer/Index2.cshtml

Graphical user interface, text, application, email

Description automatically generated

@using OnlineGame.Web.Models

@model IEnumerable<Gamer>

@{

    ViewBag.Title = "Index2";

}

<h2>Index2</h2>

@foreach (Gamer item in Model)

{

    @\*@Html.Partial("\_Gamer", item)\*@

    {

        Html.RenderPartial("\_Gamer", item);

    }

}

@\*

1.

//@Html.Partial("\_Gamer", modelObj)  V.S. {  @Html.RenderPartial("\_Gamer", modelObj); }

1.1.

Using Partial() only if you need to assign the ouput to variable.

RenderPartial() writes ouput to output stream which provides better performance.

1.2.

//@Html.Partial("\_Gamer", modelObj)

Partial return MvcHtmkString.

1.3.

//{  @Html.RenderPartial("\_Gamer", modelObj); }

RenderPartial is a void method and writes ouput to output stream,

so you need { ... }

\*@