

(T3)手寫 EntityFramework 連接 2Tables

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## 0. Summary

=====

In this tutorial, we will discuss

\* Actionlink

\* EntityFramework with 2 Tables

In order to make you more familiar with MVC,

I want you to practice to create MVC project from zero backgrounds over and over again until later tutorial.

=====

補充 1

在我的課程有說

For some reason, gamers 會是 null

然後我還說我不知道為什麼

-->

其實是因為 EF 預設就是 lazy loading  
他不會去 load navigation property 裡面的值  
請參考

<https://dotblogs.com.tw/yc421206/2014/04/18/144784>

# 1. Create DB: OnlineGame

## 1.1. Create DB: OnlineGame

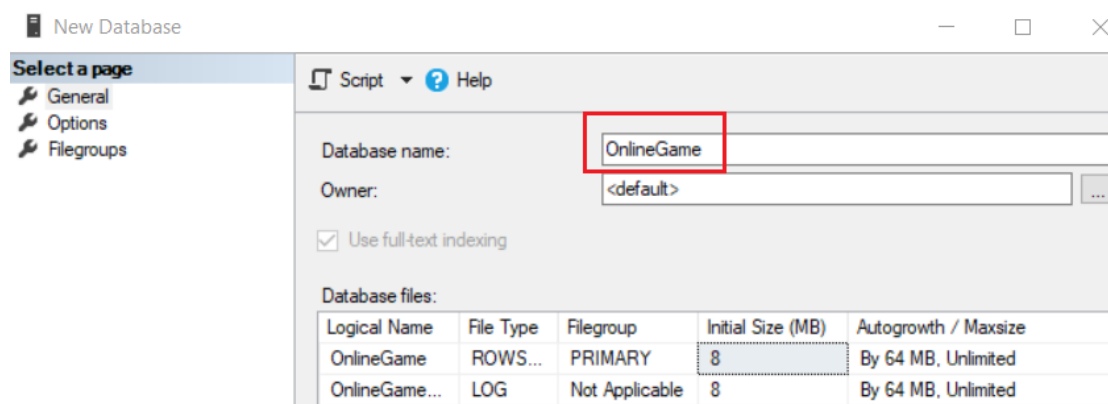
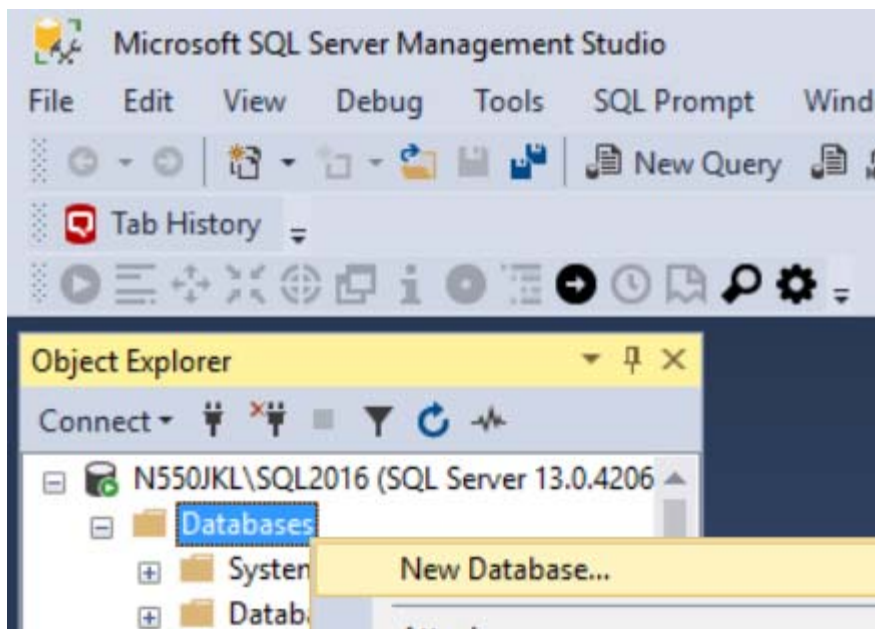
In SQL server Management Studio (SSMS)

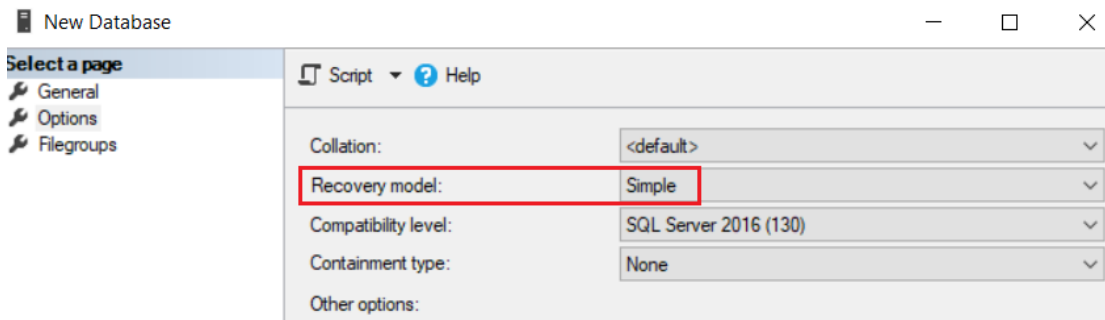
Database --> Right Click --> New Database -->

In General Tab -->

Name: **OnlineGame**

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





## 1.2. Create Table

--Run the following query to create Gamer Table

```
--1. 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) 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,
    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' );
INSERT Gamer
VALUES ( N'Name01 ABB', N'Male', N'City01', '1979/4/28', 1 );
INSERT Gamer
VALUES ( N'Name02 CDDE', N'Female', N'City03', '1981/7/24', 2 );
INSERT Gamer
VALUES ( N'Name03 FIJK', N'Female', N'City01', '1984/12/5', 3 );
INSERT Gamer
VALUES ( N'Name04 LMOPPO', N'Male', N'City02', '1983/5/29', 1 );
INSERT Gamer
VALUES ( N'Name05 QRSTT', N'Male', N'City01', '1979/6/20', 3 );
INSERT Gamer
VALUES ( N'Name06 TUVVX', N'Female', N'City03', '1984/5/15', 3 );
INSERT Gamer
VALUES ( N'Name07 XYZZXX', N'Female', N'City01', '1986/4/29', 2 );
INSERT Gamer
VALUES ( N'Name08 ABBCDE', N'Male', N'City02', '1985/7/28', 1 );
INSERT Gamer
VALUES ( N'Name09 QRSTTUVVXX', N'Male', N'City02', '1983/4/16', 1 );
GO -- Run the previous command and begins new batch
```

## 1.3. Create Database level 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

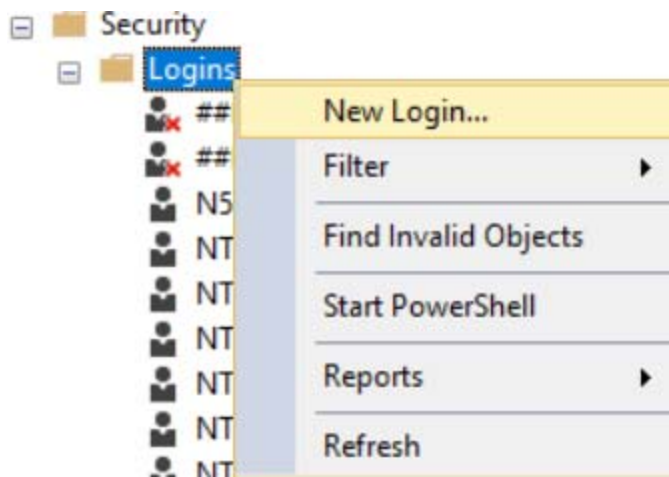
**sysadmin**

-->

User Mapping Tab

Select **OnlineGame**

Select every single role.



Login - New

Select a page

- General
- Server Roles
- User Mapping
- Securables
- Status

Connection

Server: N55QJKL\SQL2016

Connection: N55QJKL\pmp1

[View connection properties](#)

Progress

Ready

Script Help

Login name:  Search...

☐ 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:

Default language:

OK Cancel

Login Properties - Tester

Select a page

General

Server Roles

User Mapping


Securables

Status


Connection


Server:  
N550JKL\SQL2016

Connection:  
N550JKL\pmp1

 [View connection properties](#)

Progress

 Ready

Script  Help

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

Server roles:

☐ bulkadmin

☐ dbcreator

☐ diskadmin

☐ processadmin

☒ public

☐ securityadmin

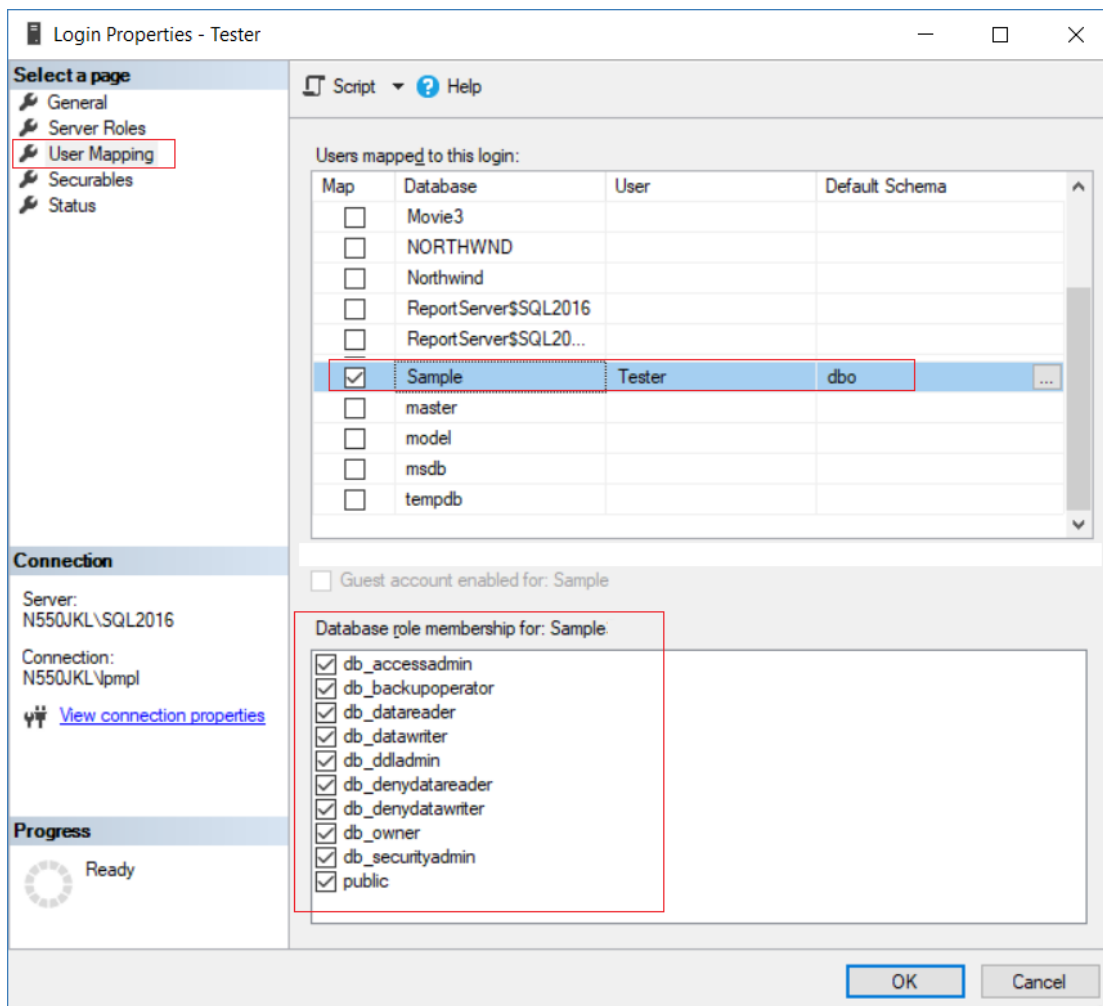
☐ serveradmin

☐ setupadmin

☒ sysadmin

OK

Cancel



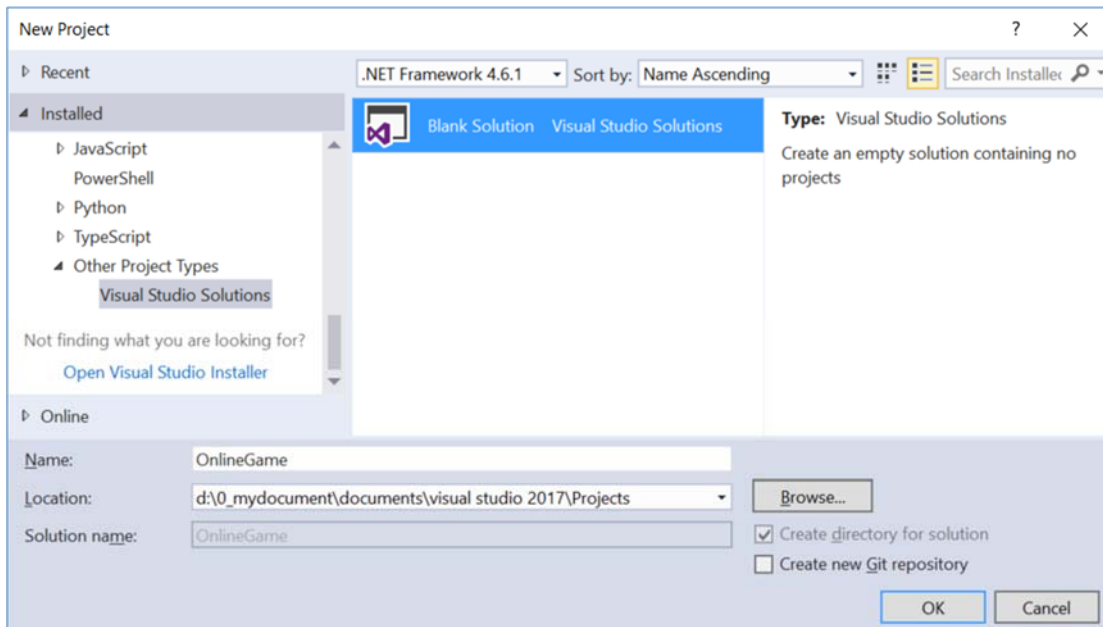
## 2. New Project - OnlineGame

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

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

-->

Name: **OnlineGame**



## 2.1. New Project - OnlineGame.Web

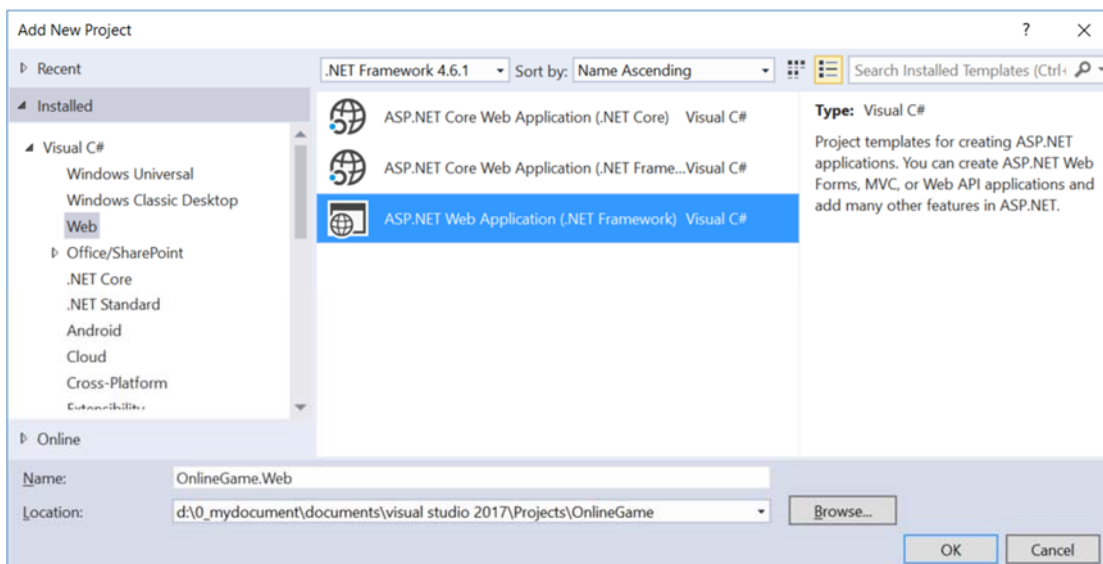
Solutions Name --> Add --> New Project -->

Visual C# --> Web --> [ASP.NET](#) Web Application (.Net Framework)

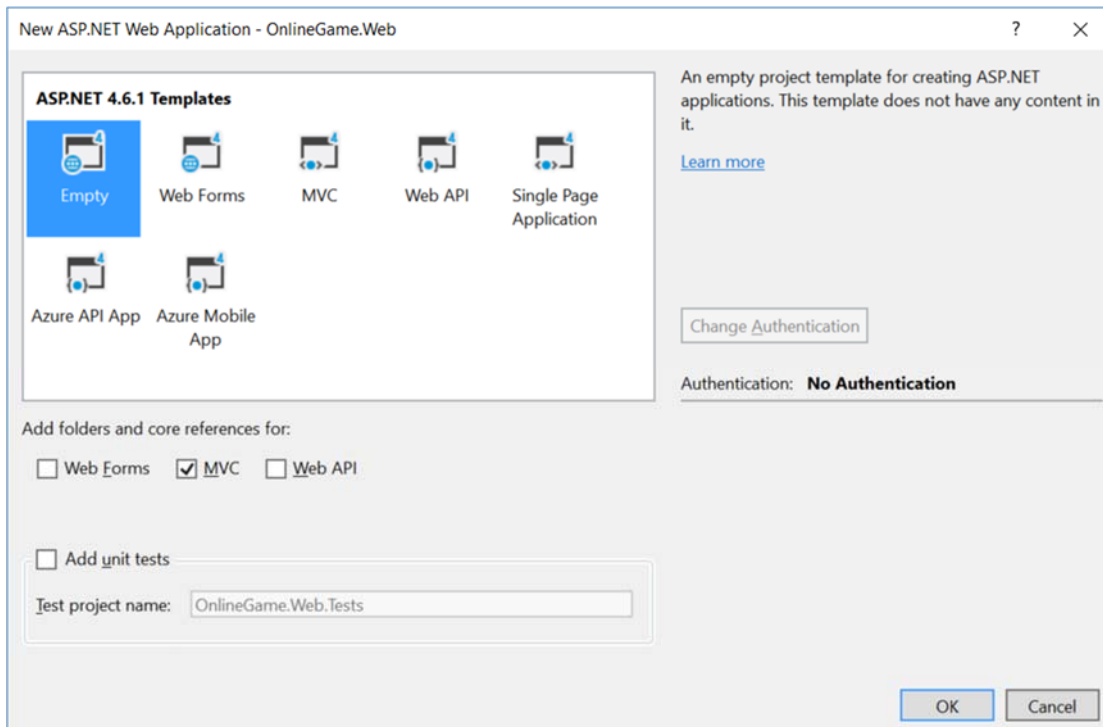
-->

Name: **OnlineGame.Web**

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







### 2.1.1. 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);
        }
    }
}
```

### 2.1.2. 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 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 = "Home", 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-ignoreroresource-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.

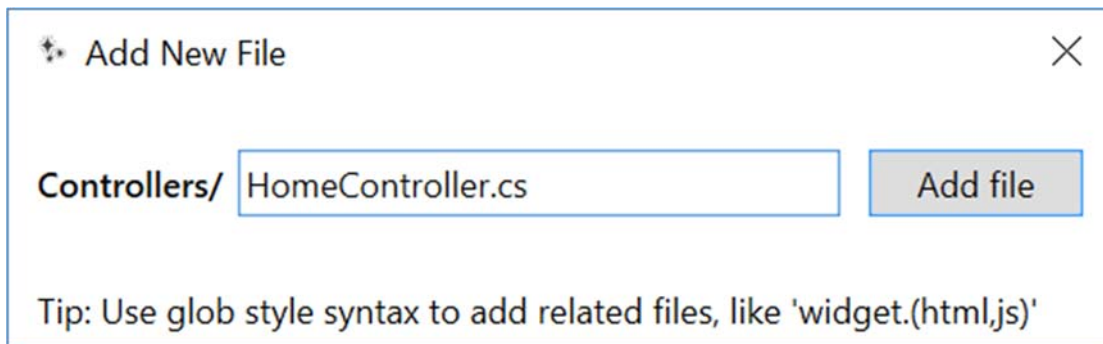
```
*/
```

## 2.2. Controllers/HomeController.cs

Because **Add New File** (extension and update)

press **Shift+F2**

Controllers/HomeController.cs



```
using System.Collections.Generic;
```

```
using System.Web.Mvc;
```

```
namespace OnlineGame.Web.Controllers
```

```
{
```

```
    public class HomeController : Controller
```

```
    {
```

```
        /// GET: Home
```

```
        //public string Index()
```

```
        //{
```

```
        //    return "Hello";
```

```
        //}
```

```
        /// http://localhost/OnlineGame.Web/home/index/aa?name=bbb
```

```
        /// http://localhost/OnlineGame.Web/home/index/aa?name2=bbb
```

```
        //public string Index(string id)
```

```
        //{
```

```
        //    string queryString = Request.QueryString["name"];
```

```
        //    return $"Hey, Id={id} , name={queryString}";
```

```
        //}
```

```
        /// http://localhost/OnlineGame.Web/home/index/aa?name=bbb
```

```
        /// http://localhost/OnlineGame.Web/home/index/aa?name2=bbb
```

```
        //public string Index(string id, string name)
```

```
        //{
```

```
        //    // return string.Format("Hey, Id ={0} , name ={1}", id, name);
```

```
        //    return $"Hey, Id ={id} , name ={name}";
```

```
        //}
```

```

//public List<string> Index()
//{
//    return new List<string>
//    {
//        "Name01",
//        "Name02",
//        "Name03"
//    };
//    // Return System.Collections.Generic.List`1[System.String]
//    // This is Wrong.
//}
//public ActionResult Index()
//{
//    return View();
//}
//public ActionResult Index()
//{
//    ViewBag.Names = new List<string>
//    {
//        "Name01",
//        "Name02",
//        "Name03"
//    };
//    return View();
//}
public ActionResult Index()
{
    ///1.
    //ViewBag.Names = new List<string>
    //{
    //    "ViewBag.Names01",
    //    "ViewBag.Names02",
    //    "ViewBag.Names03"
    //};
    ///2.
    //ViewData["Names"] = new List<string>
    //{
    //    "ViewData[\"Names\"]01",
    //    "ViewData[\"Names\"]02",
    //    "ViewData[\"Names\"]03"
    //};
    ///3.
    //ViewBag.Names = new List<string>
    //{
    //    "ViewBag.Names01",
    //    "ViewBag.Names02",
    //    "ViewBag.Names03"
    //};
    //ViewData["Names"] = new List<string>
    //{
    //    "ViewData[\"Names\"]01",
    //    "ViewData[\"Names\"]02",
    //    "ViewData[\"Names\"]03"

```

```

    //});
    //4.
    ViewBag.Names = new List<string>
    {
        "ViewBag.Names01",
        "ViewBag.Names02",
        "ViewBag.Names03"
    };
    ViewData["Names2"] = new List<string>
    {
        "ViewData[\"Names\"]01",
        "ViewData[\"Names\"]02",
        "ViewData[\"Names\"]03"
    };
    return View();
}
public string GetStringA()
{
    return "AAAAAA";
}
}
}

```

/\*

1.

When we try to return a list of data,

E.g.

```
return new List<string>
```

```

{
    "Name01",
    "Name02",
    "Name03"
};

```

Then, it will only display the data type of the variable  
E.g.

```
System.Collections.Generic.List`1[System.String]
```

This is not what we want,

thus, we need a view to display the data in the format we want.

2.

```
//public ActionResult Index()
```

```
//{
```

```
//    return View();
```

```
//}
```

```
ViewResult extend ViewResultBase
```

```
ViewResultBase extend ActionResult.
```

Thus, you can return View()

3.

In Home/HomeController.cs

```
//ViewBag.Names = new List<string>
```

```
//{
```

```
//    "ViewBag.Names01",
```

```
//    "ViewBag.Names02",
```

```
//    "ViewBag.Names03"
```

```
//};
```

```
//ViewData["Names2"] = new List<string>
```

```
//{
```

```
//    "ViewData[\"Names\"]01",
```

```
//    "ViewData[\"Names\"]02",
```

```
//    "ViewData[\"Names\"]03"
```

```
//};
```

In Views/HomeIndex.cshtml

```
//@foreach (string strNames1 in ViewBag.Names)
```

```
//{
```

```
//    <li>@strNames1</li>
```

```
//}
```

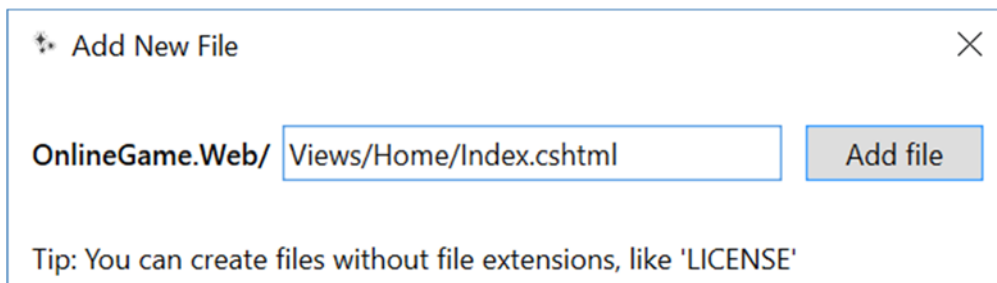
```
//<br/>
//<br/>
//@foreach (string strNames2 in (List<string>) ViewData["Names2"])
//{
//    <li>@strNames2</li>
//}
Both ViewData and ViewBag can pass values from Controller to View.
Both ViewData and ViewBag allow an object to have properties dynamically added to it.
Because of dynamic feature,
both ViewData and ViewBag does not provide compile time error checking.
Thus, it is very easy to get Null Reference Error
if miss misspells the property name or key name.
*/
```

## 2.3. Views/Home/Index.cshtml

Because **Add New File** (extension and update)

press **Shift+F2**

Views/Home/Index.cshtml



```
@model dynamic
@{
    ViewBag.Title = "title";
}
<h2>Name List</h2>
<ul>
    @*
        1.
        @foreach (string strNames1 in ViewBag.Names)
        {
            <li>@strNames1</li>
        }
    *@
    @*
        2.
        @foreach (string strNames2 in (List<string>)ViewData["Names"])
        {
            <li>@strNames2</li>
        }
    *@
    @*
        3.
        @foreach (string strNames1 in ViewBag.Names)
        {
            <li>@strNames1</li>
        }
        <br />
        <br />
        @foreach (string strNames2 in (List<string>)ViewData["Names"])
        {
            <li>@strNames2</li>
        }
    @*
```

```

    }
    *@
4.
@foreach (string strNames1 in ViewBag.Names)
{
    <li>@strNames1</li>
}
<br />
<br />
@foreach (string strNames2 in (List<string>)ViewData["Names2"])
{
    <li>@strNames2</li>
}
</ul>

```

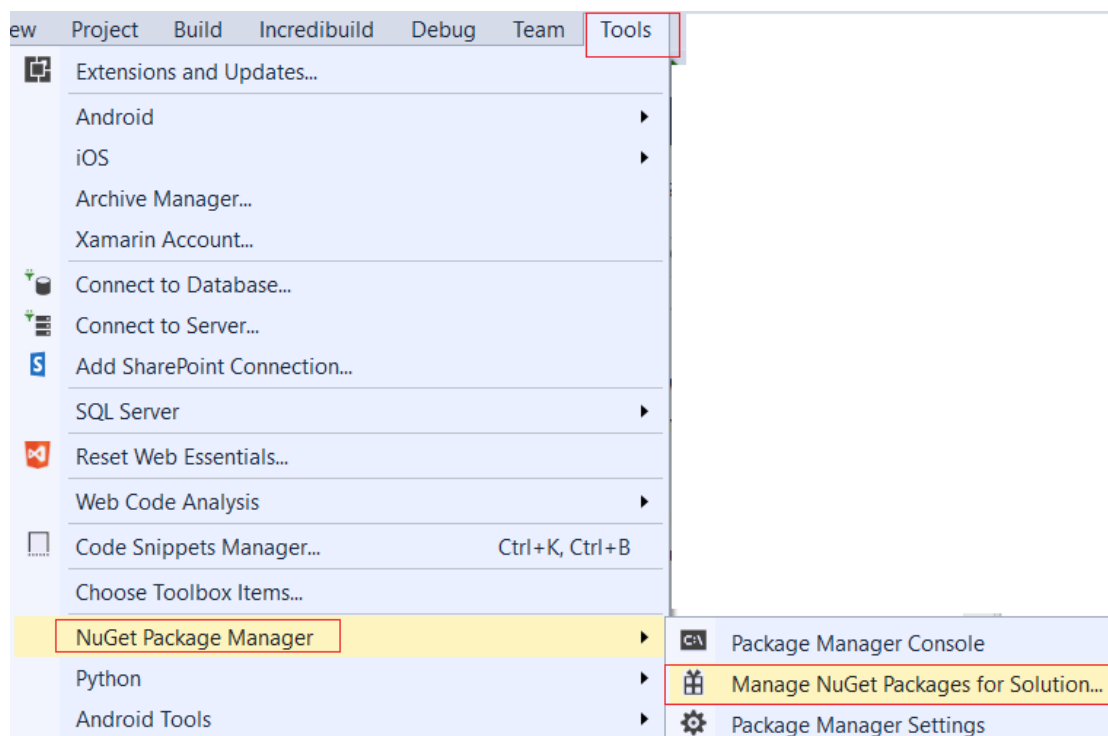
## 2.4. Entity Framework

### 2.4.1. Install Entity Framework

Tools --> NuGet Package Manager --> Manage NuGet Packages for Solutions...

--> Browse tab --> Search : **EntityFramework**

--> Install it



NuGet - Solution

Browse Installed Updates 2 Consolidate

EntityFramework x Include prerelease

Package source: nuget.org

**EntityFramework** by Microsoft, 38.7M downloads v6.2.0  
Entity Framework is Microsoft's recommended data access technology for new applicat...

**EntityFramework.SqlServerCompact** by Microsoft, 826K downloads v6.2.0  
Allows SQL Server Compact 4.0 to be used with Entity Framework.

**Microsoft.AspNet.Identity.EntityFramework** by Microsoft, 7.02M download v2.2.1  
ASP.NET Identity providers that use Entity Framework.

**Oracle.ManagedDataAccess.EntityFramework** by Oracle, 337K download v12.2.1100  
The ODP.NET, Managed Driver Entity Framework package for EF 6 applications.

Each package is licensed to you by its owner. NuGet is not responsible for, nor does it grant any licenses to, third-party packages.

**EntityFramework**

Version(s) - 0

Project	Version
<input checked="" type="checkbox"/>	OnlineGame.Web

Installed: not installed Uninstall

Version: Latest stable 6.2.0 Install

Preview

**Review Changes**

Visual Studio is about to make changes to this solution. Click OK to proceed with the changes listed below.

OnlineGame.Web

**Installing:**  
EntityFramework.6.2.0

☐ Do not show this again

OK Cancel

License Acceptance

**License Acceptance**

The following package(s) require that you accept their license terms before installing.

**EntityFramework** Author(s): Microsoft  
[View License](#)

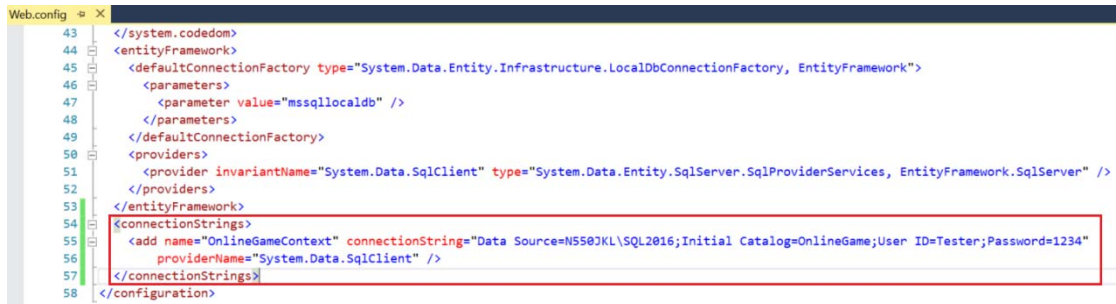
By clicking "I Accept," you agree to the license terms for the package(s) listed above. If you do not agree to the license terms, click "I Decline."

I Accept I Decline



## 2.4.2. Web.config : Add Connection String

If you have already install EntityFramework dll, then you may skip this step.



The screenshot shows a portion of a Web.config file. The code is as follows:

```
43 </system.codedom>
44 <entityFramework>
45   <defaultConnectionFactory type="System.Data.Entity.Infrastructure.LocalDbConnectionFactory, EntityFramework">
46     <parameters>
47       <parameter value="mssqllocaldb" />
48     </parameters>
49   </defaultConnectionFactory>
50   <providers>
51     <provider invariantName="System.Data.SqlClient" type="System.Data.Entity.SqlServer.SqlProviderServices, EntityFramework.SqlServer" />
52   </providers>
53 </entityFramework>
54 <connectionStrings>
55   <add name="OnlineGameContext" connectionString="Data Source=N550JKL\SQL2016;Initial Catalog=OnlineGame;User ID=Tester;Password=1234"
56     providerName="System.Data.SqlClient" />
57 </connectionStrings>
58 </configuration>
```



The screenshot shows the full Web.config file. The code is as follows:

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <!--
3   For more information on how to configure your ASP.NET application, please visit
4   https://go.microsoft.com/fwlink/?linkid=301880
5   -->
6 <configuration>
7   <configSections>
8     <!-- For more information on Entity Framework configuration, visit http://go.microsoft.com/fwlink/?linkid=237468 -->
9     <section name="entityFramework" type="System.Data.Entity.Internal.ConfigFile.EntityFrameworkSection, EntityFramework, Version=6.0.0.0,
10       Culture=neutral, PublicKeyToken=b77a5c561934e089" requirePermission="false" />
11   </configSections>
12   <connectionStrings>
13     <add name="OnlineGameContext" connectionString="Data Source=N550JKL\SQL2016;Initial Catalog=OnlineGame;User ID=Tester;Password=1234"
14       providerName="System.Data.SqlClient" />
15   </connectionStrings>
16   <appSettings>
17     <add key="webpages:Version" value="3.0.0.0" />
18     <add key="webpages:Enabled" value="false" />
19     <add key="ClientValidationEnabled" value="true" />
20     <add key="UnobtrusiveJavaScriptEnabled" value="true" />
21   </appSettings>
22 </configuration>
```

```
<connectionStrings>
  <add name="OnlineGameContext" connectionString="Data Source=N550JKL\SQL2016;Initial
Catalog=OnlineGame;User ID=Tester;Password=1234"
    providerName="System.Data.SqlClient" />
</connectionStrings>
```

Go to Web.config

Add the connection sting on the bottom of Web.config

Please ensure the connection string name "OnlineGameContext" must match the DbContext Name "OnlineGameContext" in next section.

OnlineGameContext class extends DbContext.

When we create an instance object of OnlineGameContext,

it will search the connection string with the name "OnlineGameContext" within web config.

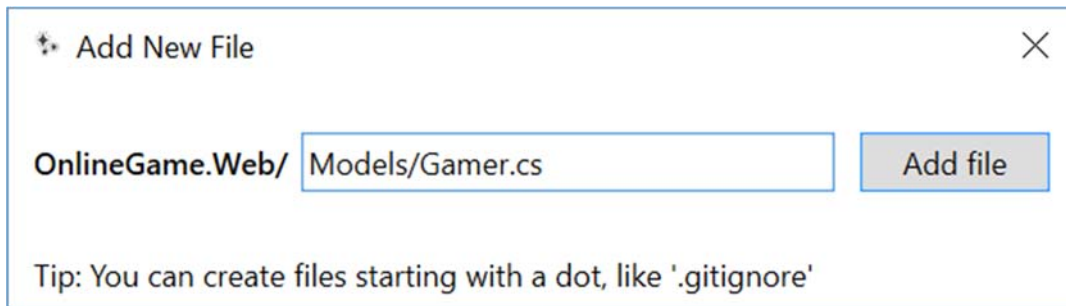
## 2.5. Models

### 2.5.1. Models/Gamer.cs

Because Add New File (extension and update)

press **Shift+F2**

Models/Gamer.cs



```
using System;
using System.ComponentModel.DataAnnotations.Schema;
namespace OnlineGame.Web.Models
{
```

```
    //[Table("Gamer")]
    [Table("Gamer", Schema = "dbo")]
    public class Gamer
    {
        public int Id { get; set; }
        [Column("Name")]
        public string Name { get; set; }
        public string Gender { get; set; }
        public string City { get; set; }
        public DateTime DateOfBirth { get; set; }
        public int TeamId { get; set; }
    }
}
```

```
/*
1.
////[Table("Gamer")]
//[Table("Gamer", Schema = "dbo")]
//...
//[Column("Name")]
//public string Name { get; set; }
Reference:
```

<http://www.entityframeworktutorial.net/code-first/table-dataannotations-attribute-in-code-first.aspx>  
<http://www.entityframeworktutorial.net/code-first/column-dataannotations-attribute-in-code-first.aspx>

In order to map the Gamer Table entity into the Model, Models/Gamer.cs.

You need to add the [Table("Gamer")] attribute in the class level.

Then the EntityFramework will automatically map the Gamer table fields into Gamer Model properties.

Gamer table field, id will automatically map to Gamer Model properties, id, because it has the same name.

If you want to map 2 different name, then you need [Column("Name")] attribute.

```
//[Column("Name")]
//public string Name2 { get; set; }
```

This [Column("Name")] attribute

will map Table Column, Name, to Model Property, Name2.

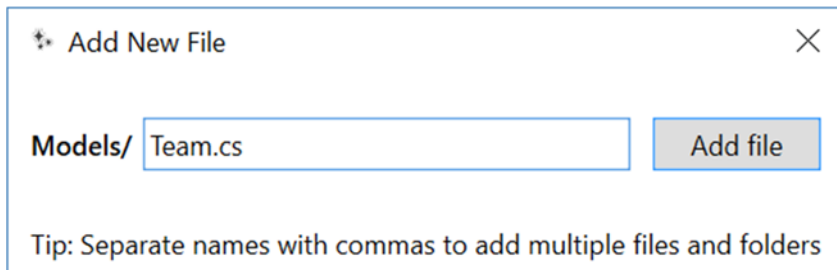
```
*/
```

## 2.5.2. Models/Team.cs

Because **Add New File** (extension and update)

press **Shift+F2**

Models/Team.cs



```
using System.Collections.Generic;
using System.ComponentModel.DataAnnotations.Schema;
namespace OnlineGame.Web.Models
{
    //[Table("Gamer")]
    [Table("Team", Schema = "dbo")]
    public class Team
    {
        public int Id { get; set; }
        [Column("Name")]
        public string Name { get; set; }
        public List<Gamer> Gamers { get; set; }
    }
}
```

## 2.6. Data/OnlineGameContext.cs

```
using System.Data.Entity;
using OnlineGame.Web.Models;
namespace OnlineGame.Web.Data
{
    public class OnlineGameContext : DbContext
    {
        public DbSet<Gamer> Gamers { get; set; }
        public DbSet<Team> Teams { get; set; }
    }
}
```

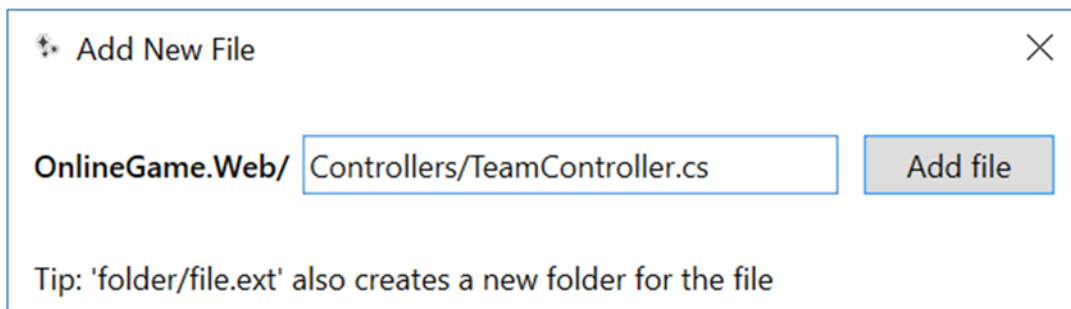
## 2.7. Team

### 2.7.1. Controllers/TeamController.cs

Because **Add New File** (extension and update)

press **Shift+F2**

Controllers/TeamController.cs



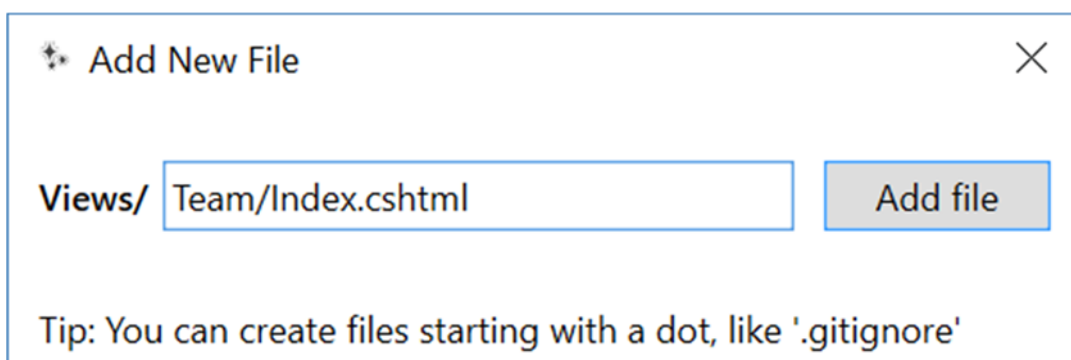
```
using System.Collections.Generic;
using System.Linq;
using System.Web.Mvc;
using OnlineGame.Web.Data;
using OnlineGame.Web.Models;
namespace OnlineGame.Web.Controllers
{
    public class TeamController : Controller
    {
        public ActionResult Index()
        {
            OnlineGameContext context = new OnlineGameContext();
            List<Team> teams = context.Teams.ToList();
            return View(teams);
        }
    }
}
```

## 2.7.2. Views/Team/Index.cshtml

Because **Add New File** (extension and update)

press **Shift+F2**

Views/Team/Index.cshtml



```
@using OnlineGame.Web.Models;
@model IEnumerable<Team>
@{
    ViewBag.Title = "Teams List";
}
<div style="font-family: Arial">
    <h2>@ViewBag.Title.ToString()</h2>
```

```

@foreach (Team team in Model)
{
    <ul>
        <li>
            Id: @team.Id
        </li>
        <li>
            @Html.ActionLink(team.Name, "Index", "Gamer", new {teamId = team.Id}, null)
        </li>
    </ul>
}
</div>

```

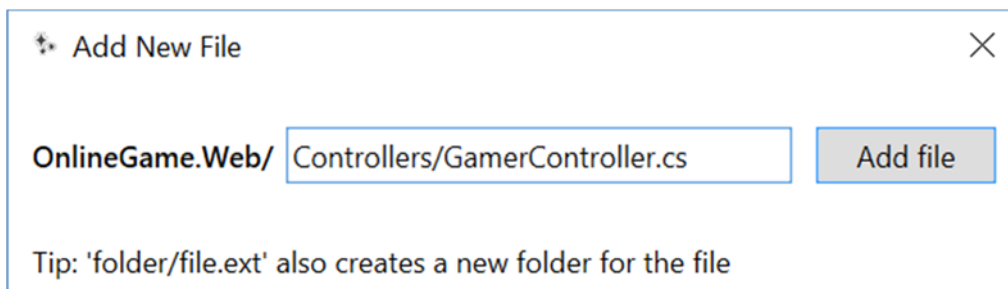
## 2.8. Gamer

### 2.8.1. Controllers/GamerController.cs

Because **Add New File** (extension and update)

press **Shift+F2**

Controllers/GamerController.cs



```

using System.Collections.Generic;
using System.Linq;
using System.Web.Mvc;
using OnlineGame.Web.Data;
using OnlineGame.Web.Models;
namespace OnlineGame.Web.Controllers
{
    public class GamerController : Controller
    {
        // http://localhost/OnlineGame.Web/Gamer/Details
        //public ActionResult Details()
        //{
        //    var gamer = new Gamer
        //    {
        //        Id = 1,
        //        Name = "Name1",
        //        Gender = "Male",
        //        City = "City1"
        //    };
        //    return View(gamer);
        //}
        // http://localhost/OnlineGame.Web/Gamer/Details
        // http://localhost/OnlineGame.Web/Gamer/Details/1
    }
}

```

```

// http://localhost/OnlineGame.Web/Gamer/Details/2
// http://localhost/OnlineGame.Web/Gamer/Details/3
// http://localhost/OnlineGame.Web/Gamer/Details/4
public ActionResult Details(int id = 0)
{
    var onlineGameContext = new OnlineGameContext();
    Gamer gamer;
    if (id == 0)
    {
        gamer = new Gamer
        {
            Id = 0,
            Name = "Name0",
            Gender = "NULL",
            City = "NULL"
        };
        // or you may throw exception here.
    }
    else
    {
        gamer = onlineGameContext.Gamers.Single(p => p.Id == id);
        //Throws exception if can not find the single entity
    }
    return View(gamer);
}

public ActionResult Index(int teamId)
{
    OnlineGameContext context = new OnlineGameContext();
    List<Gamer> gamers = context.Gamers.Where(gamer => gamer.TeamId == teamId).ToList();
    return View(gamers);
}
}

/*
//var onlineGameContext = new OnlineGameContext();
//Gamer gamer = onlineGameContext.Gamers.Single(p => p.Id == id);
When user request, EntityFramework will request the data from the database
and store its data into a temp place called DBSet.
onlineGameContext.Gamers is a DBSet which is kind of temp place to store the Gamer Table Data.
We use LINQ to map the Gamer Table Column id to Gamer Model property, id.
Thus, we can get the gamer entity from Gamer Table by its id.
Then store gamer entity data into Gamer Model object.
Thus, each Gamer Model object is a temp place to store each Gamer Table entity from the database.
Then we pass the Gamer Model object as the ViewModel,
Thus, the Details.cshtml view can use the values from Gamer Model object
which is actually the temp place to store Gamer Table entity data.
*/

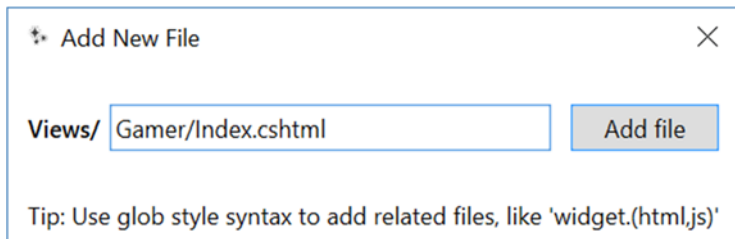
```

## 2.8.2. Views/Gamer/Index.cshtml

Because **Add New File** (extension and update)

press **Shift+F2**

Views/Gamer/Index.cshtml



```
@using OnlineGame.Web.Models;
@model List<Gamer>
@{
    ViewBag.Title = "Gamers List";
}
<div style="font-family: Arial">
    <h2>@ViewBag.Title.ToString()</h2>
    @foreach (Gamer gamer in Model)
    {
        <ul>
            <li>
                Team Id: @gamer.TeamId
            </li>
            <li>
                Gamer Id: @gamer.Id
            </li>
            <li>
                Name: @Html.ActionLink(gamer.Name, "Details", "Gamer", new { id = gamer.Id }, null)
            </li>
        </ul>
        <br />
    }
</div>
@Html.ActionLink("Back to Gamers List", "Index", "Team")
```

### 2.8.3. Views/Gamer/Details.cshtml

```
@using OnlineGame.Web.Models;
@model Gamer
@{
    ViewBag.Title = "Gamer Details";
}
<h2>Gamer Details</h2>
<ul>
    <li>Id: @Model.Id</li>
    <li>Name: @Model.Name</li>
    <li>Gender: @Model.Gender</li>
    <li>City: @Model.City</li>
    <li>DateOfBirth: @Model.DateOfBirth</li>
    <li>TeamId: @Model.TeamId</li>
</ul>
@Html.ActionLink("Back to Gamers List", "Index", "Gamer", new { teamId = Model.TeamId }, null)
```

## 2.9. Run the Web

<http://localhost:63398/Team>

<http://localhost:63398/Team/index>



## Teams List

- Id: 1
- [Team1](#)
- Id: 2
- [Team2](#)
- Id: 3
- [Team3](#)

<http://localhost:63398/Gamer?teamId=1>



## Gamers List

- Team Id: 1
- Gamer Id: 1
- Name: [Name01 ABB](#)
- Team Id: 1
- Gamer Id: 4
- Name: [Name04 LMOPPQ](#)
- Team Id: 1
- Gamer Id: 8
- Name: [Name08 ABBCDE](#)
- Team Id: 1
- Gamer Id: 9
- Name: [Name09 QRSTUVXX](#)

[Back to Gamers List](#)

<http://localhost:63398/Gamer/Details/1>





## Gamer Details

- Id: 1
- Name: Name01 ABB
- Gender: Male
- City: City01
- DateOfBirth: 28/04/1979 12:00:00 AM
- TeamId: 1

[Back to Gamers List](#)

<http://localhost:63398/>



## Name List

4.
  - ViewBag.Names01
  - ViewBag.Names02
  - ViewBag.Names03
- ViewData["Names"]01
  - ViewData["Names"]02
  - ViewData["Names"]03