

(T13)實做類似 GridView、SearchBar(搜尋引擎)、Pagging(分頁)、Sorting(排序)、DeleteMultipleRows(執行多筆移除)、SelectAll,UnSelectAll(全選,全不選)  
CourseGUID: 8503b39c-5887-4634-8291-facfb3117924

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(T13)實做類似 GridView、SearchBar(搜尋引擎)、Pagging(分頁)、Sorting(排序)、DeleteMultipleRows(執行多筆移除)、SelectAll,UnSelectAll(全選,全不選)

(T13-1)實做類似 GridView、SearchBar(搜尋引擎) (1. to 4.)

(T13-2)實做類似 GridView、Pagging(分頁) (5.)

(T13-3)實做類似 GridView、Sorting(排序) (6.)

(T13-4)實做類似 GridView、DeleteMultipleRows(執行多筆移除) (7.)

(T13-5)實做類似 GridView、SelectAll,UnSelectAll(全選,全不選) (8.)

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# 0. What to learn

- \* 哪尼?手寫搜尋引擎 Search Bar 搭配 MVC 實現有分頁的 GridView，還可 Sorting，可全選取 On/Off 並執行多筆移除。
- \* 完全手寫一個 Search Bar 搜尋引擎。
- \* 使用 MVC 實現像是 Web Form 的無敵 GridView。
- \* 實現 GridView 分業，排序，可全選 On/Off，並執行多筆移除。

其他參考資料

MVC 這裡我教了分頁

<http://kevintsengtw.blogspot.com/2014/11/pagedlistmvc-pager.html>

請把這個當作補充教材，這邊是把 pagelist 中文化

## Gamer Index

[Create New](#)

Search By:

☐ Name ☒ Gender

Male

Go

	Name	Gender	EmailAddress	Action
<input type="checkbox"/>	Name11 HFSASER	Male	11@AAA.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input type="checkbox"/>	Name08 ABBCDE	Male	8@HH.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input type="checkbox"/>	Name05 QRSTT	Male	5@EEE.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input type="checkbox"/>	Name04 LMOPPQ	Male	4@DD.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input type="checkbox"/>	Name01 ABB	Male	1@AAA.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

Delete Selected

## 1. OnlineGame DB

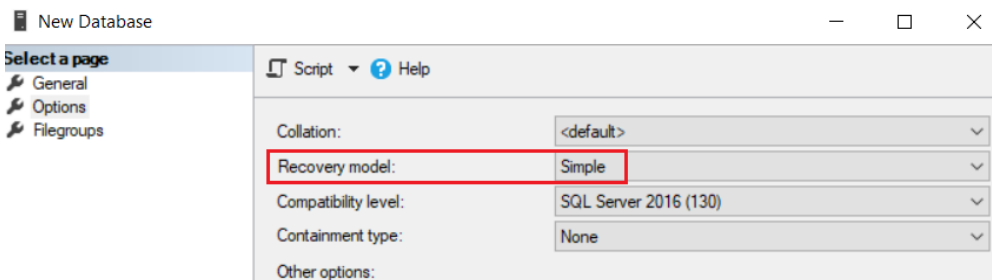
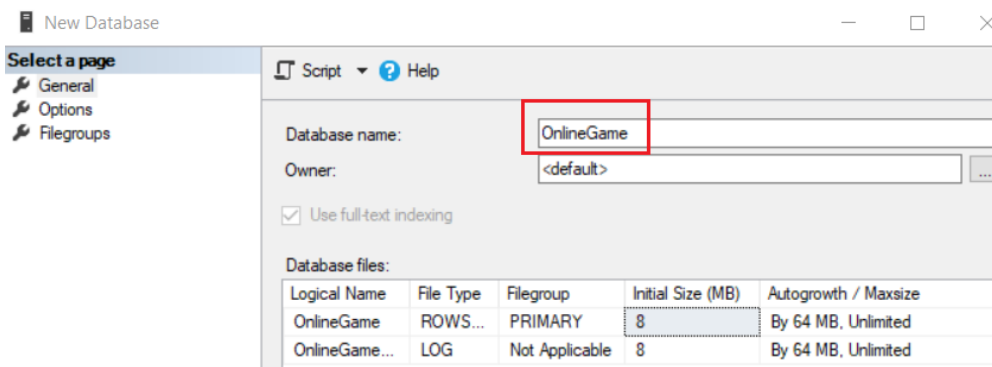
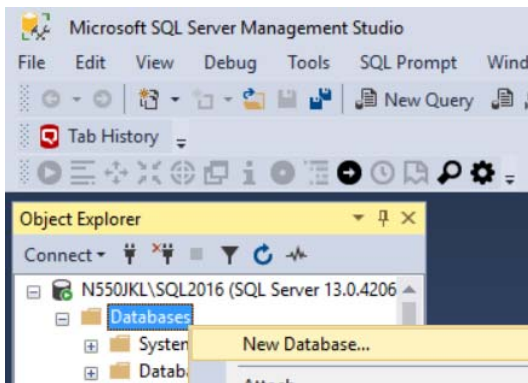
### 1.1. TSQL

In SQL server Management Studio (SSMS)  
Database --> Right Click --> New Database -->

In General Tab -->

Name: **OnlineGame**

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



```
--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
--2. Create Table
CREATE TABLE Gamer
(
    Id INT PRIMARY KEY
        IDENTITY(1, 1)
```

```

        NOT NULL ,
[Name] NVARCHAR(100) NOT NULL ,
Gender NVARCHAR(10) NOT NULL,
EmailAddress nvarchar(100) NOT NULL,
)
--3. Insert Data
INSERT  Gamer
VALUES  ( N'Name01 ABB', N'Male', '1@AAA.com');
INSERT  Gamer
VALUES  ( N'Name02 CDDE', N'Female', '2@BBB.com');
INSERT  Gamer
VALUES  ( N'Name03 FIJK', N'Female', '3@CCCC.com');
INSERT  Gamer
VALUES  ( N'Name04 LMOPPQ', N'Male', '4@DD.com');
INSERT  Gamer
VALUES  ( N'Name05 QRSTT', N'Male', '5@EEE.com');
INSERT  Gamer
VALUES  ( N'Name06 TUVVX', N'Female', '6@FF.com');
INSERT  Gamer
VALUES  ( N'Name07 XYZZX', N'Female', '7@GGGG.com');
INSERT  Gamer
VALUES  ( N'Name08 ABBCDE', N'Male', '8@HH.com');
INSERT  Gamer
VALUES  ( N'Name09 QRSTTUVXX', N'Male', '9@IIII.com');
INSERT  Gamer
VALUES  ( N'Name10 GGAAEE', N'Male', '10@XXWFFS.com');
INSERT  Gamer
VALUES  ( N'Name11 HFSASER', N'Male', '11@AAA.com');
INSERT  Gamer
VALUES  ( N'Name12 ESVSADC', N'Female', '12@BBB.com');
INSERT  Gamer
VALUES  ( N'Name13 REDSVF', N'Female', '13@CCCC.com');
INSERT  Gamer
VALUES  ( N'Name14 BBGVDD', N'Male', '14@DD.com');
INSERT  Gamer
VALUES  ( N'Name15 WWVFSSQ', N'Male', '15@EEE.com');
INSERT  Gamer
VALUES  ( N'Name16 TTVSS', N'Female', '16@FF.com');
INSERT  Gamer
VALUES  ( N'Name17 AAQERR', N'Female', '17@GGGG.com');
INSERT  Gamer
VALUES  ( N'Name18 BBFSAQ', N'Male', '18@HH.com');
INSERT  Gamer
VALUES  ( N'Name19 QRSTTUVXX', N'Male', '19@IIII.com');
INSERT  Gamer
VALUES  ( N'Name20 HHFWSWQ', N'Male', '20@XXWFFS.com');
GO -- Run the previous command and begins new batch

```

## 1.2. Security login

In SQL server

Object Explorer --> Security --> Logins --> New Logins

-->

General Tab

Login Name :

**Tester**

Password:

1234

Default Database:

**OnlineGame**

-->

Server Roles Tab

Select

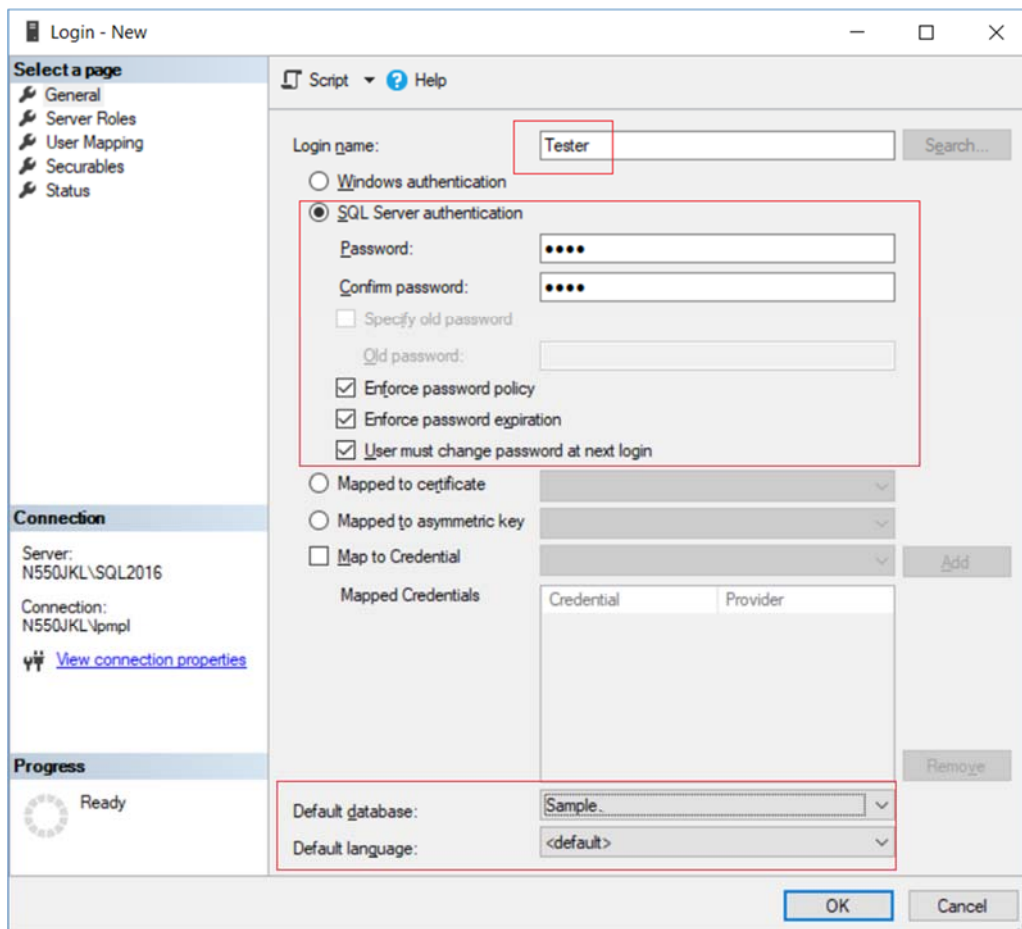
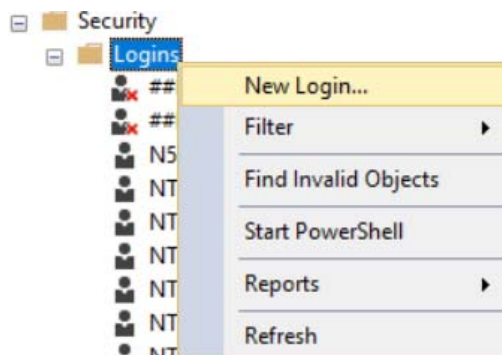
**sysadmin**

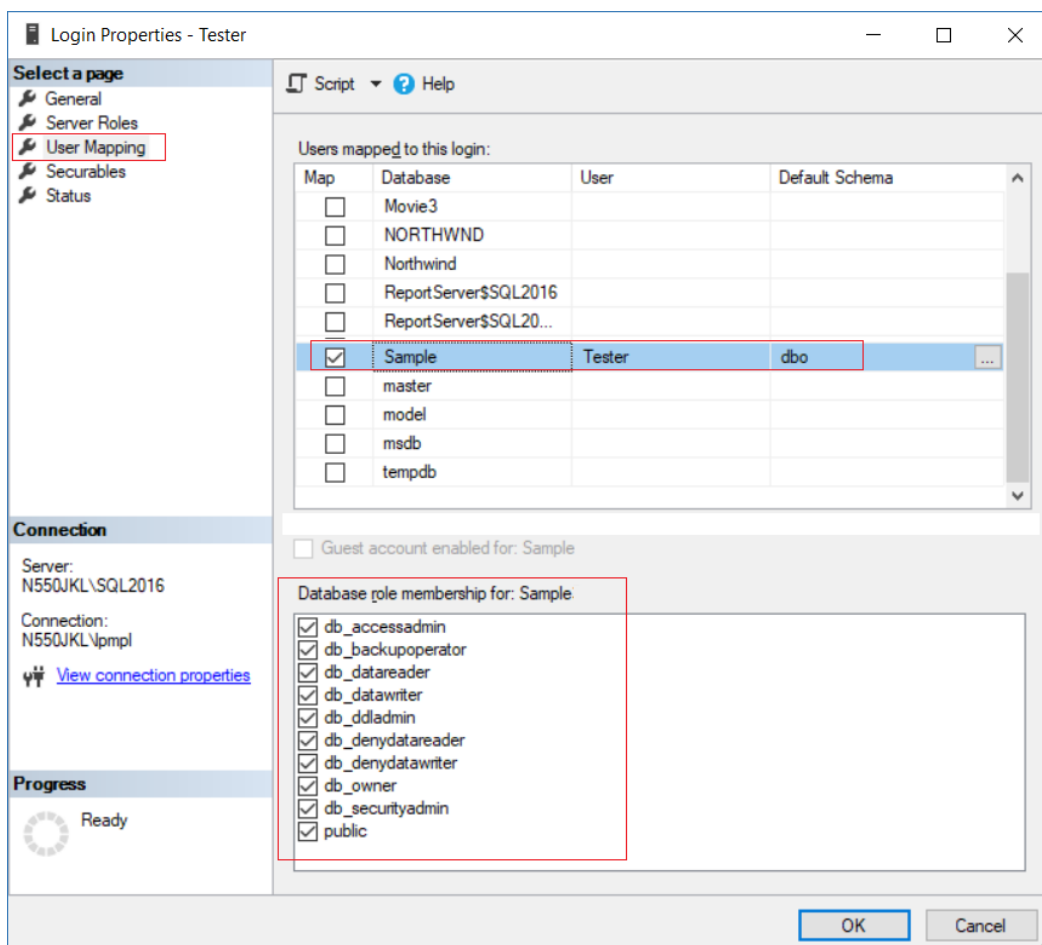
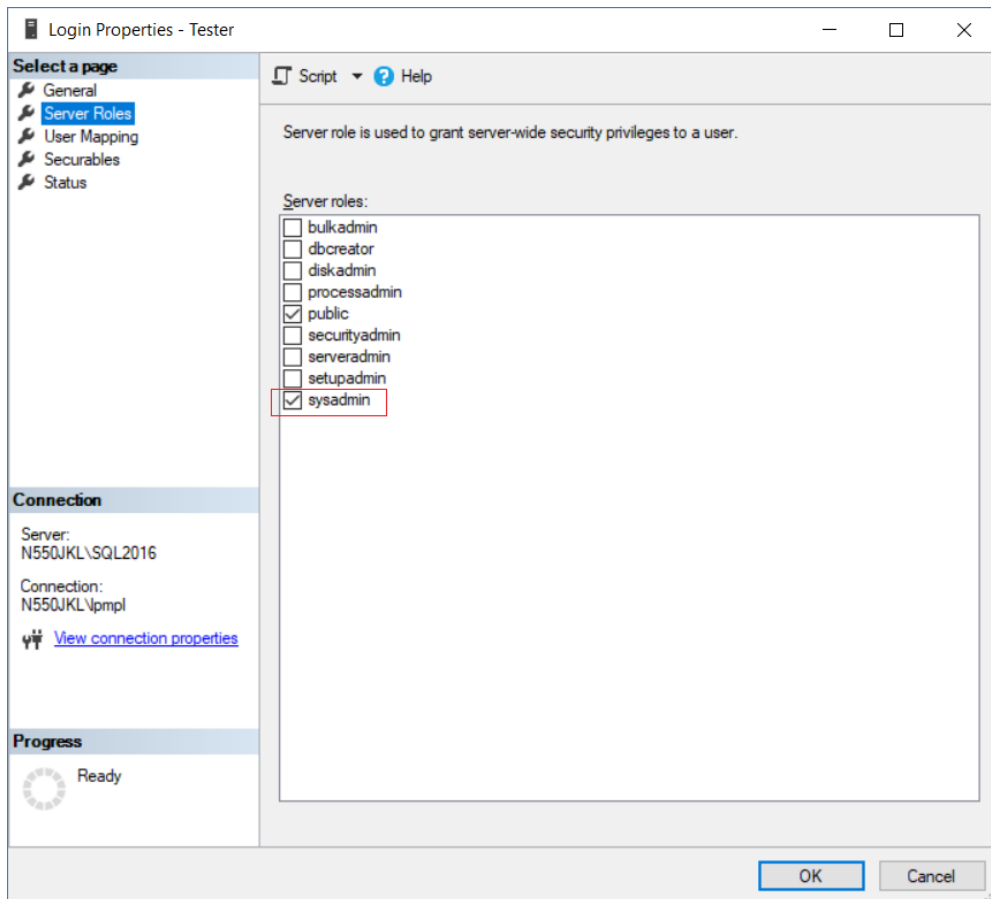
-->

User Mapping Tab

Select **OnlineGame**

Select every single role.





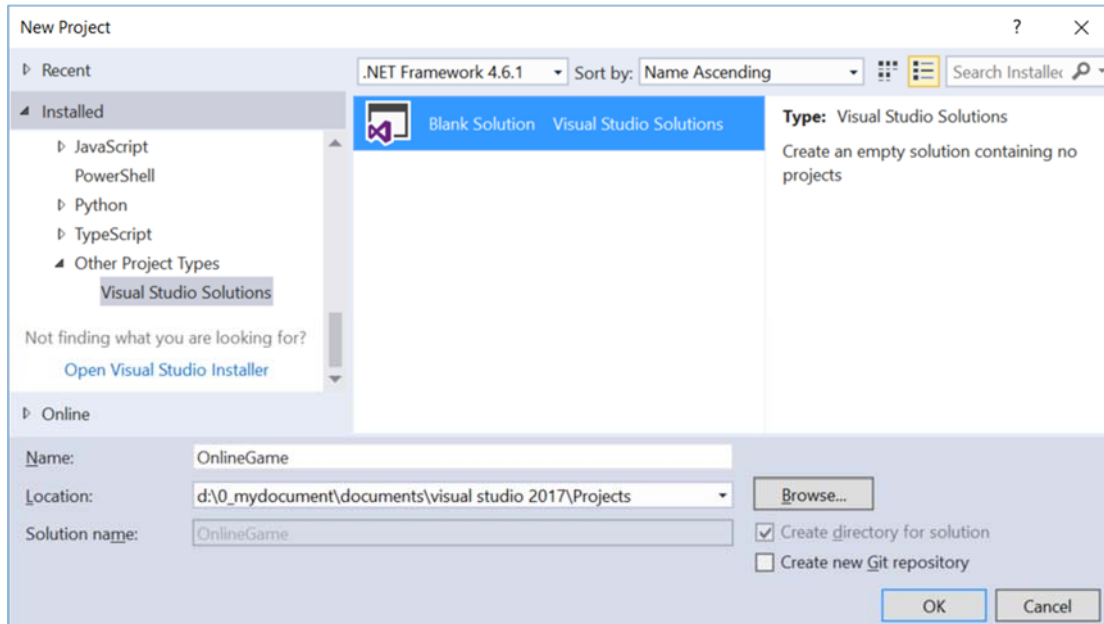
## 2. New Project - OnlineGame

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

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

-->

Name: **OnlineGame**



### 2.1. New Project - OnlineGame.Web

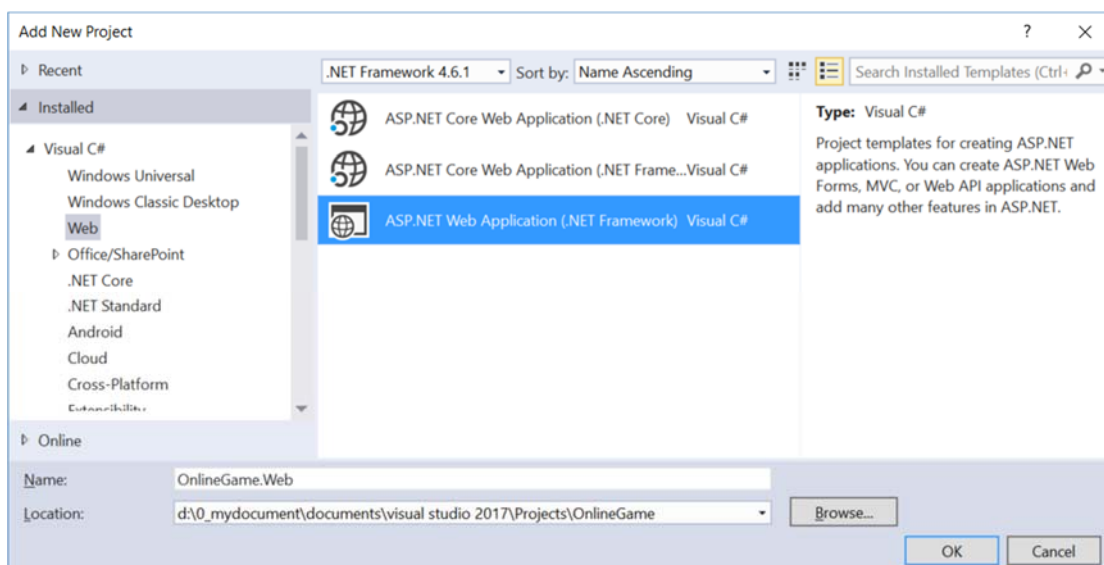
Solutions Name --> Add --> New Project -->

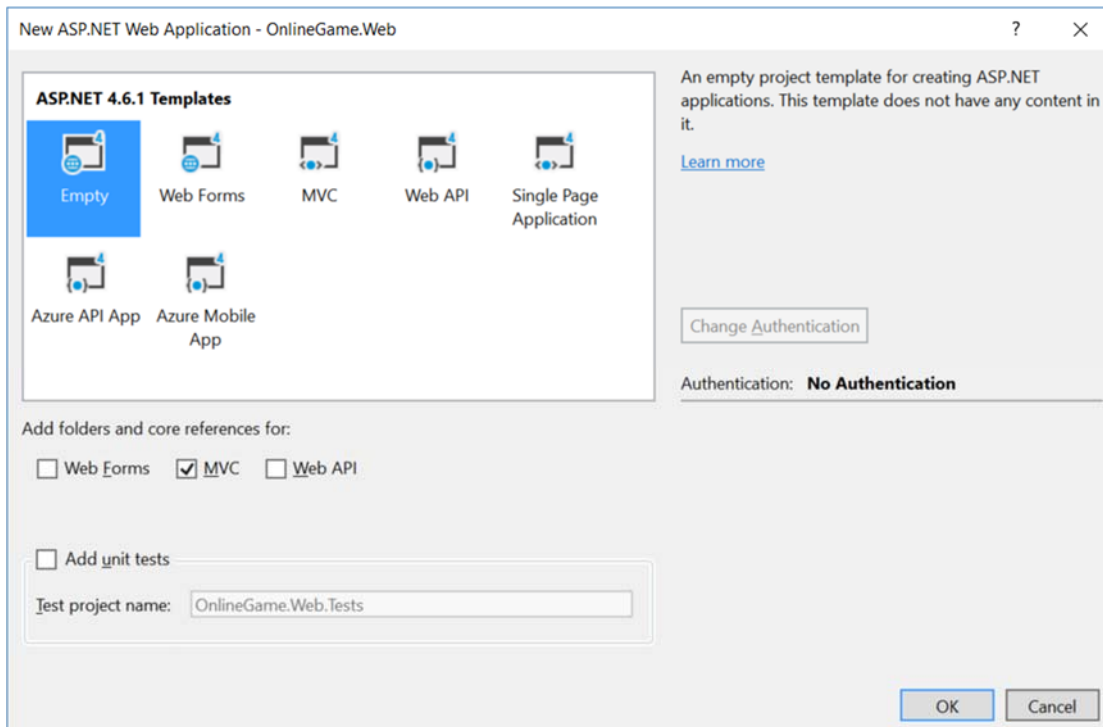
Visual C# --> Web --> [ASP.NET](#) Web Application (.Net Framework)

-->

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 = "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-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:

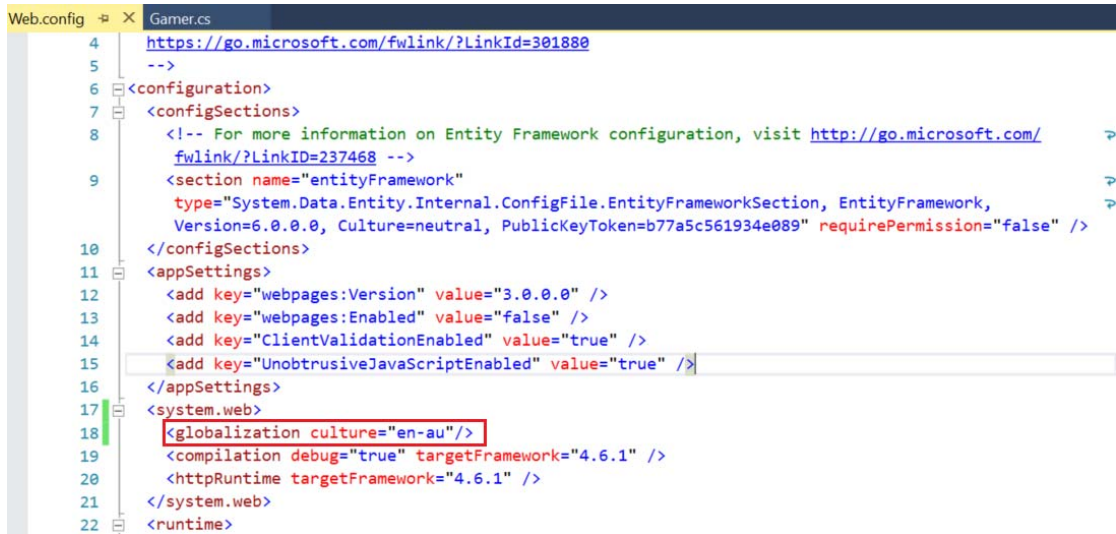
<https://msdn.microsoft.com/en-us/library/wwh16c6c.aspx>

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.  
\*/

### 2.1.3. Web.config

A screenshot of a Visual Studio editor showing the Web.config file. The file is open in a tab labeled 'Web.config'. The code is as follows:

```
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, Culture=neutral, PublicKeyToken=b77a5c561934e089" requirePermission="false" />
10 </configSections>
11 <appSettings>
12 <add key="webpages:Version" value="3.0.0.0" />
13 <add key="webpages:Enabled" value="false" />
14 <add key="ClientValidationEnabled" value="true" />
15 <add key="UnobtrusiveJavaScriptEnabled" value="true" />
16 </appSettings>
17 <system.web>
18 <globalization culture="en-au"/>
19 <compilation debug="true" targetFramework="4.6.1" />
20 <httpRuntime targetFramework="4.6.1" />
21 </system.web>
22 </configuration>
```

```
<system.web>
  <globalization culture="en-au"/>
```

## 3. OnlineGame.Web

### 3.1. ADO.Net Entity Data Model - Entity Framework

In Visual Studio 2017

**Models** folder --> Right Click --> Add --> New Item  
--> Visual C# --> Data --> ADO.Net Entity Data Model

Name:

**OnlineGameDataModel**

-->

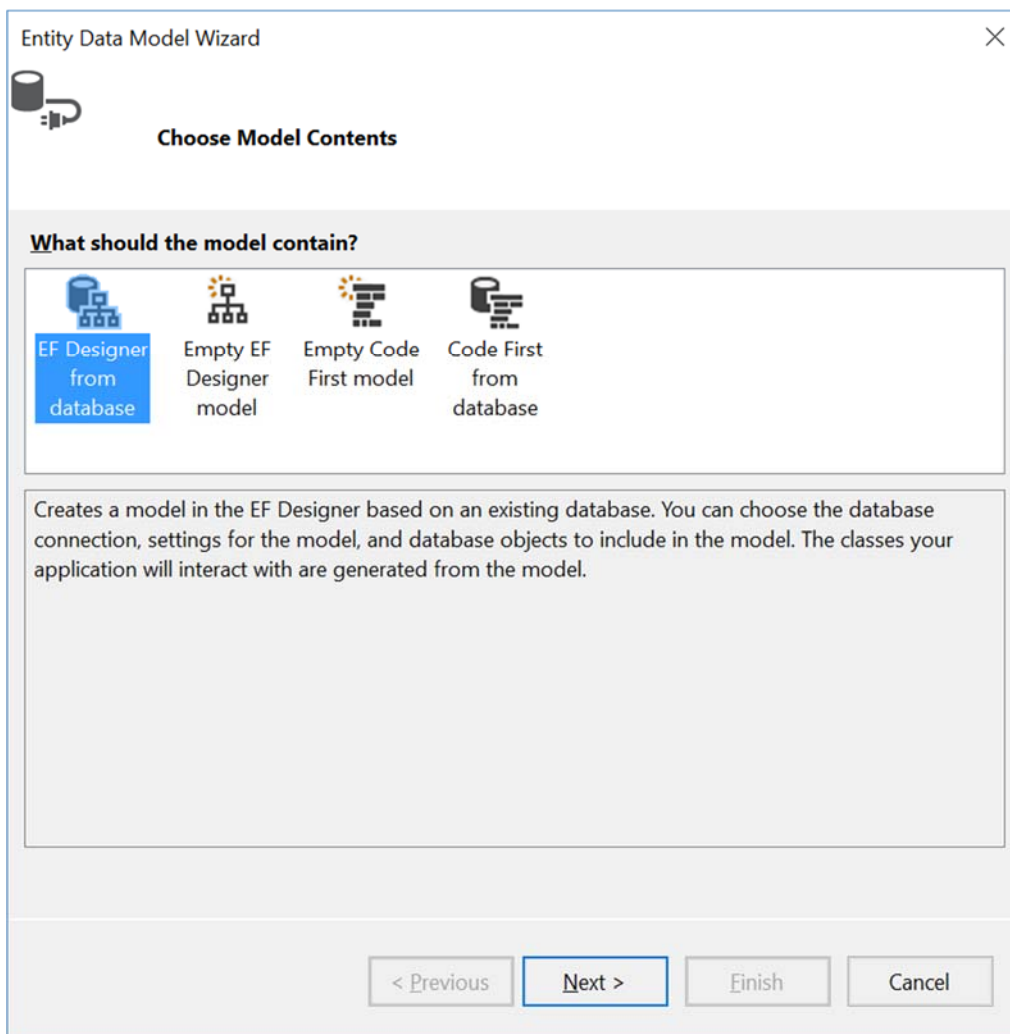
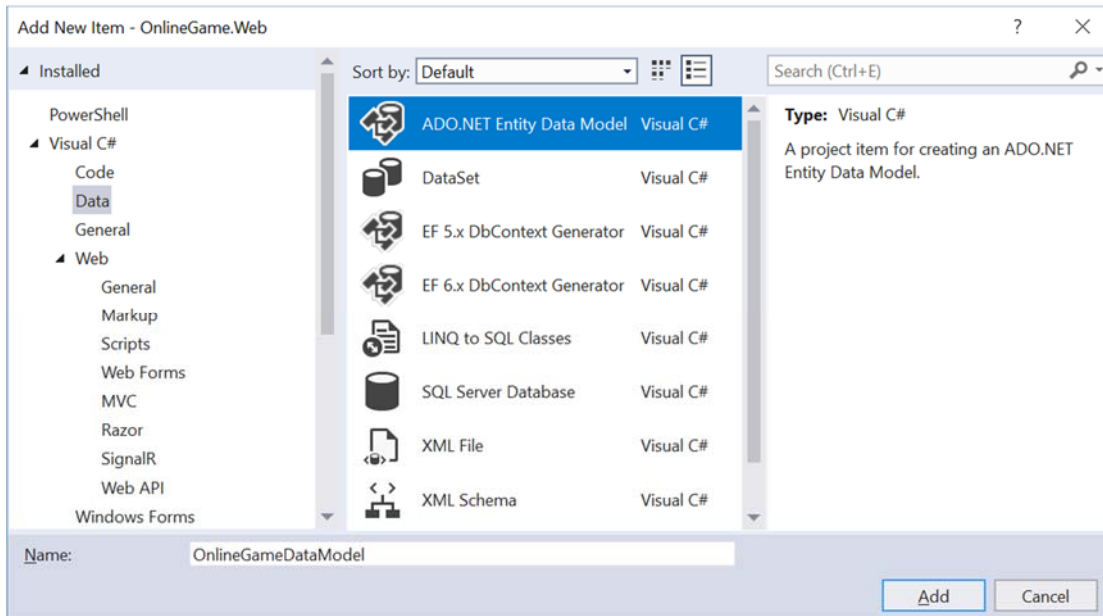
EF Designer from database

....

-->

Save Connection settings in Web.Config as:

**OnlineGameContext**



**Choose Your Data Connection**

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

New Connection...

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

- ☐ No, exclude sensitive data from the connection string. I will set it in my application code.
- ☐ Yes, include the sensitive data in the connection string.

Connection string:

☒ Save connection settings in Web.Config as:

< Previous

Next >

Finish

Cancel

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

Data source:

Microsoft SQL Server (SqlClient)

Change...

Server name:

N550JKL\SQL2016

Refresh

Log on to the server

Authentication: SQL Server Authentication

User name: Tester

Password: ●●●●

☒ Save my password

Microsoft Visual Studio



Test connection succeeded.

OK

Connect to a database

☒ Select or enter a database name:

OnlineGame

☐ Attach a database file:

Browse...

Advanced...

Test Connection

OK

Cancel

**Choose Your Data Connection****Which data connection should your application use to connect to the database?**

n550jkl\sql2016.OnlineGame.dbo



New Connection...

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

- ☐ No, exclude sensitive data from the connection string. I will set it in my application code.
- ☒ Yes, include the sensitive data in the connection string.

Connection string:

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

☒ Save connection settings in Web.Config as:

OnlineGameContext

&lt; Previous

Next &gt;

Finish

Cancel

**Choose Your Version**

**Which version of Entity Framework do you want to use?**

- ☒ Entity Framework 6.x  
☐ Entity Framework 5.0

**i** It is also possible to install and use other versions of Entity Framework.  
[Learn more about this](#)


&lt; Previous

Next &gt;

Finish


Cancel


Entity Data Model Wizard





Choose Your Database Objects and Settings


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


☒  Tables

☒  dbo

☒  Gamer

☐  sysdiagrams

☐  Views

☐  Stored Procedures and Functions

☒ Pluralize or singularize generated object names

☒ Include foreign key columns in the model

☒ Import selected stored procedures and functions into the entity model

Model Namespace:

OnlineGameModel

< Previous

Next >

Finish

Cancel

Security Warning

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

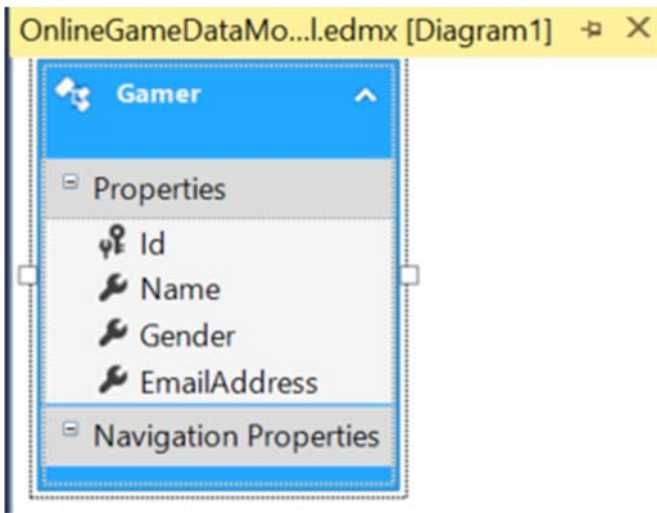
Click OK to run the template.  
Click Cancel to stop the process.

☐ Do not show this message again

OK

Cancel



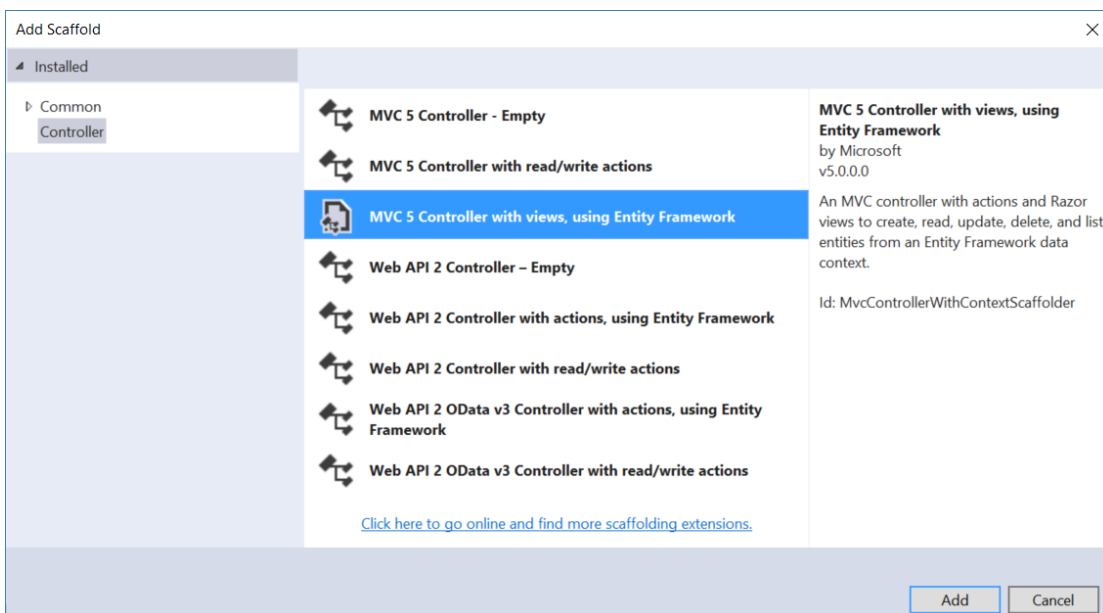
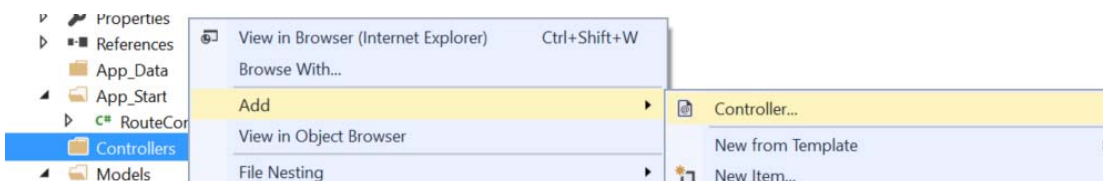


## 3.2. Controllers/GamersController.cs

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

-->

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



Add Controller

Model class: Gamer (OnlineGame.Web.Models)

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

☒ Use async controller actions

Views:

☒ Generate views

☒ Reference script libraries

☒ Use a layout page:

...

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

Controller name: GamerController

Add Cancel

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

Microsoft Visual Studio

Error

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

OK

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

# Index

[Create New](#)

Name	Gender	EmailAddress	
Name01 ABB	Male	1@AAA.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name02 CDDE	Female	2@BBB.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name03 FIJK	Female	3@CCCC.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name04 LMOPPQ	Male	4@DD.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name05 QRSTT	Male	5@EEE.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name06 TUVVX	Female	6@FF.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name07 XYZZXX	Female	7@GGGG.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name08 ABBCDE	Male	8@HH.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name09 QRSTTUVXX	Male	9@IIII.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

## 4. OnlineGame.Web - Search Bar

### 4.1. Views/Gamer/Index.cshtml

```
@model IEnumerable<OnlineGame.Web.Models.Gamer>
@{
    ViewBag.Title = "Gamer Index";
}
<h2>@ViewBag.Title</h2>
<p>
    @Html.ActionLink("Create New", "Create")
</p>
<p>
    @using (Html.BeginForm("Index", "Gamer", FormMethod.Get))
    {
        <b>Search By:</b><br />
        @Html.RadioButton("searchBy", "Name", true) <text>Name</text>
        @Html.RadioButton("searchBy", "Gender") <text>Gender</text><br />
        @Html.TextBox("searchText") <br />
        <input type="submit" value="Go" />
    }
</p>
<table class="table">
    <tr>
        <th>
            @Html.DisplayNameFor(model => model.Name)
        </th>
        <th>
            @Html.DisplayNameFor(model => model.Gender)
        </th>
        <th>
            @Html.DisplayNameFor(model => model.EmailAddress)
        </th>
    </tr>
```

```

        <th>
            Action
        </th>
    </tr>
    @if (!Model.Any())
    {
        <tr>
            <td colspan="4">
                No matched records.
            </td>
        </tr>
    }
    @foreach (var item in Model)
    {
        <tr>
            <td>
                @Html.DisplayFor(modelItem => item.Name)
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.Gender)
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.EmailAddress)
            </td>
            <td>
                @Html.ActionLink("Edit", "Edit", new { id = item.Id }) |
                @Html.ActionLink("Details", "Details", new { id = item.Id }) |
                @Html.ActionLink("Delete", "Delete", new { id = item.Id })
            </td>
        </tr>
    }
</table>

```

## 4.2. Controllers/GamerController.cs

Modify the index action

```

// GET: Gamer
[HttpGet]
public async Task<ActionResult> Index(string searchBy, string searchText)
{
    List<Gamer> gamers = await db.Gamers.ToListAsync();
    if (searchBy == "Gender")
    {
        gamers = await db.Gamers
            .Where(x => x.Gender == searchText || searchText == null)
            .ToListAsync();
    }
    if (searchBy == "Name")
    {
        gamers = await db.Gamers
            .Where(x => x.Name.Contains(searchText) || searchText == null)

```

```

        .ToListAsync();
    }
    return View(gamers);
}

```

## 4.3. Run Search Bar

<http://localhost:52319/?searchBy=Name&searchText=01>

### Gamer Index

[Create New](#)

Search By:

☒ Name ☐ Gender



Name	Gender	EmailAddress	Action
Name01 ABB	Male	1@AAA.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

<http://localhost:52319/?searchBy=Gender&searchText=Male>

### Gamer Index

[Create New](#)

Search By:

☐ Name ☒ Gender

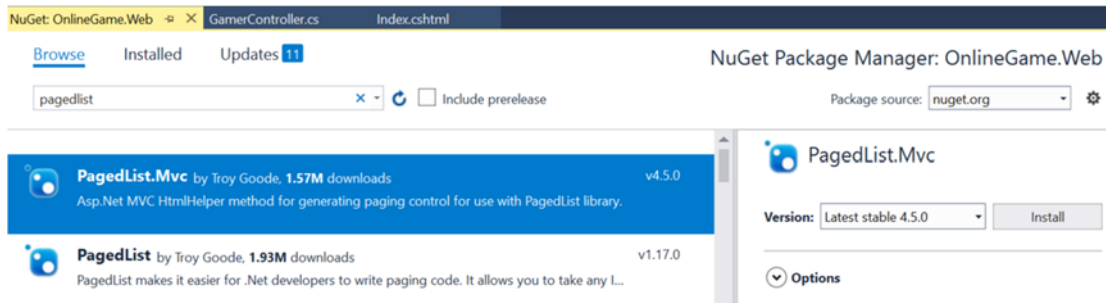


Name	Gender	EmailAddress	Action
Name01 ABB	Male	1@AAA.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name04 LMOPPQ	Male	4@DD.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name05 QRSTT	Male	5@EEE.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name08 ABBCDE	Male	8@HH.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name09 QRSTTUVXX	Male	9@III.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

## 5. OnlineGame.Web - PagedList, PagedList.Mvc

## 5.1. Install NuGet Package

When we install "**PagedList.Mvc**", it will automatically install "**PagedList**".



## 5.2. Controllers/GamerController.cs

```
// GET: Gamer
[HttpGet]
public async Task<ActionResult> Index(string searchBy, string searchText, int? pageNumber)
{
    List<Gamer> gamers = await db.Gamers.ToListAsync();
    if (searchBy == "Gender")
    {
        gamers = await db.Gamers
            .Where(x => x.Gender == searchText || searchText == null)
            .ToListAsync();
    }
    if (searchBy == "Name")
    {
        gamers = await db.Gamers
            .Where(x => x.Name.Contains(searchText) || searchText == null)
            .ToListAsync();
    }
    //return View(gamers);
    //1.
    //The first parameter is pagenumber
    //pageNumber ?? 1 means if the pageNumber==null, then pageNumber==1
    //2.
    //The 2nd parameter is page size.
    //We set page size is 5.
    IPagedList<Gamer> gamerPagedList = gamers.ToPagedList(pageNumber ?? 1, 5);
    return View(gamerPagedList);
}
```

## 5.3. Views/Gamer/Index.cshtml

```
@using OnlineGame.Web.Models
```

```

@using PagedList
@using PagedList.Mvc
@* @model IEnumerable<Gamer> *@
@model IPagedList<Gamer>
@{
    ViewBag.Title = "Gamer Index";
}
<h2>@ViewBag.Title</h2>
<p>
    @Html.ActionLink("Create New", "Create")
</p>
<p>
    @using (Html.BeginForm("Index", "Gamer", FormMethod.Get))
    {
        <b>Search By:</b><br />
        @Html.RadioButton("searchBy", "Name", true) <text>Name</text>
        @Html.RadioButton("searchBy", "Gender") <text>Gender</text><br />
        @Html.TextBox("searchText") <br />
        <input type="submit" value="Go" />
    }
</p>
<table class="table">
    <tr>
        <th>
            @* @Html.DisplayNameFor(model => model.Name) *@
            @Html.DisplayNameFor(model => model.First().Name)
        </th>
        <th>
            @* @Html.DisplayNameFor(model => model.Gender) *@
            @Html.DisplayNameFor(model => model.First().Gender)
        </th>
        <th>
            @* @Html.DisplayNameFor(model => model.EmailAddress) *@
            @Html.DisplayNameFor(model => model.First().EmailAddress)
        </th>
        <th>
            Action
        </th>
    </tr>
    @if (!Model.Any())
    {
        <tr>
            <td colspan="4">
                No matched records.
            </td>
        </tr>
    }
    @foreach (var item in Model)
    {
        <tr>
            <td>
                @Html.DisplayFor(modelItem => item.Name)
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.Gender)
            </td>
        </tr>
    }
}

```

```

        <td>
            @Html.DisplayFor(modelItem => item.EmailAddress)
        </td>
        <td>
            @Html.ActionLink("Edit", "Edit", new { id = item.Id }) |
            @Html.ActionLink("Details", "Details", new { id = item.Id }) |
            @Html.ActionLink("Delete", "Delete", new { id = item.Id })
        </td>
    </tr>
}
</table>
@*@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
    new
    {
        //pageNumber = pageNumber,
        pageNumber,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"]
    }))*@
@*@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
    new
    {
        //pageNumber = pageNumber,
        pageNumber,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"]
    })),
    new PagedListRenderOptions{ Display = PagedListDisplayMode.IfNeeded })*@
@*@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
    new
    {
        //pageNumber = pageNumber,
        pageNumber,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"]
    })),
    new PagedListRenderOptions
    {
        Display = PagedListDisplayMode.IfNeeded,
        DisplayPageCountAndCurrentLocation = true
    })*@
@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
    new
    {
        //pageNumber = pageNumber,
        pageNumber,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"]
    })),
    new PagedListRenderOptions
    {
        Display = PagedListDisplayMode.IfNeeded,
        DisplayPageCountAndCurrentLocation = true,
        DisplayItemSliceAndTotal = true
    })
@*
1.
//@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
//    new {
//        //pageNumber = pageNumber,
//        pageNumber,
//        searchBy = Request.QueryString["searchBy"],
//        searchText = Request.QueryString["searchText"] }]))
1.1.

```



The PagedListPager() 1st parameter is IPagedList which is the collection of gamers of current page.

1.2.

The PagedListPager() 2nd parameter is Func<int,string> generatePageURL which we use Url.Action() to generate the Func<int,string>.

In this case, Func<int,string> means that the input parameter is int, and the output is a string.

1.2.1.

The input parameter is the pageNumber which comes from the query string.

1.2.2.

The output is a string which is the generatePageURL.

In this case, it is Url.Action().

1.2.2.1.

The Url.Action() 1st parameter is action name which is "Index" action.

1.2.2.2.

The Url.Action() 2nd parameter is the route value.

1.2.2.2.1.

searchBy parameter should come from the query string, Request.QueryString["searchBy"].

1.2.2.2.2.

searchText parameter should come from the query string, Request.QueryString["searchText"].

1.3.

It will display the page number even there is only one page.

2.

```
//@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
//    new
//    {
//        //pageNumber = pageNumber,
//        pageNumber,
//        searchBy = Request.QueryString["searchBy"],
//        searchText = Request.QueryString["searchText"]
//    }),
//    new PagedListRenderOptions{ Display = PagedListDisplayMode.IfNeeded })
```

2.1.

```
//Display = PagedListDisplayMode.IfNeeded,
It will hide the page number when there is only one page,
because only one page means no need paging.
```

3.

```
//@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
//    new
//    {
//        //pageNumber = pageNumber,
//        pageNumber,
//        searchBy = Request.QueryString["searchBy"],
//        searchText = Request.QueryString["searchText"]
//    }),
//    new PagedListRenderOptions
//    {
//        Display = PagedListDisplayMode.IfNeeded,
//        DisplayPageCountAndCurrentLocation = true
//    })
```

3.1.

```
//Display = PagedListDisplayMode.IfNeeded,
It will hide the page number when there is only one page,
because only one page means no need paging.
```

3.2.

```
//DisplayPageCountAndCurrentLocation = true
It will display "Page 1 of 3"
```

4.

```
//@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
//    new
//    {
//        //pageNumber = pageNumber,
//        pageNumber,
//        searchBy = Request.QueryString["searchBy"],
```

```
//      searchText = Request.QueryString["searchText"]
//    }},
//    new PagedListRenderOptions
//    {
//        Display = PagedListDisplayMode.IfNeeded,
//        DisplayPageCountAndCurrentLocation = true,
//        DisplayItemSliceAndTotal = true
//    })
4.1.
//Display = PagedListDisplayMode.IfNeeded,
It will hide the page number when there is only one page,
because only one page means no need paging.
4.2.
//DisplayPageCountAndCurrentLocation = true
It will display "Page 1 of 3"
4.3.
//DisplayItemSliceAndTotal = true
It will display "Showing items 6 through 7 of 7"
* @
```

## 5.4. Run Search Bar with paging

<http://localhost:52319/?pageNumber=2&searchBy=Name&searchText=A>

### Gamer Index

[Create New](#)

Search By:

☒ Name ☐ Gender

Name	Gender	EmailAddress	Action
Name17 AAQERR	Female	17@GGGG.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name18 BBFSAQ	Male	18@HH.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

« Page 2 of 2. Showing items 6 through 7 of 7. 1 2

<http://localhost:52319/?searchBy=Name&searchText=B>

# Gamer Index

[Create New](#)

Search By:

☒ Name ☐ Gender

Name	Gender	EmailAddress	Action
Name01 ABB	Male	1@AAA.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name08 ABBCDE	Male	8@HH.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name14 BBGVDD	Male	14@DD.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name18 BBFSAQ	Male	18@HH.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

## 6. OnlineGame.Web - Sorting

### 6.1. Controllers/GamerController.cs

```
// GET: Gamer
[HttpGet]
public async Task<ActionResult> Index(string searchBy, string searchText, int? pageNumber, string sortBy)
{
    ViewBag.NameSort = String.IsNullOrEmpty(sortBy) ? "Name desc" : "";
    ViewBag.GenderSort = sortBy == "Gender" ? "Gender desc" : "Gender";

    List<Gamer> gamers = await db.Gamers.ToListAsync();
    if (searchBy == "Gender")
    {
        gamers = await db.Gamers
            .Where(x => x.Gender == searchText || searchText == null)
            .ToListAsync();
    }
    if (searchBy == "Name")
    {
        gamers = await db.Gamers
            .Where(x => x.Name.Contains(searchText) || searchText == null)
            .ToListAsync();
    }
    IEnumerable<Gamer> gamersOrderedEnumerable;
    switch (sortBy)
    {
        case "Name desc":
```

```

        gamersOrderedEnumerable = gamers.OrderByDescending(x => x.Name);
        break;
    case "Gender desc":
        gamersOrderedEnumerable = gamers.OrderByDescending(x => x.Gender);
        break;
    case "Gender":
        gamersOrderedEnumerable = gamers.OrderBy(x => x.Gender);
        break;
    default:
        gamersOrderedEnumerable = gamers.OrderBy(x => x.Name);
        break;
    }

    //1.
    //The first parameter is pagenumber
    //pageNumber ?? 1 means if the pageNumber==null, then pageNumber==1
    //2.
    //The 2nd parameter is page size.
    //We set page size is 5.
    //IPagedList<Gamer> gamerPagedList = gamers.ToPagedList(pageNumber ?? 1, 5);
    IPagedList<Gamer> gamerPagedList = gamersOrderedEnumerable.ToPagedList(pageNumber ?? 1, 5);
    return View(gamerPagedList);
}

```

## 6.2. Views/Gamer/Index.cshtml

```

@using OnlineGame.Web.Models
@using PagedList
@using PagedList.Mvc
@* @model IEnumerable<Gamer> *@
@model IPagedList<Gamer>
@{
    ViewBag.Title = "Gamer Index";
}
<h2>@ViewBag.Title</h2>
<p>
    @Html.ActionLink("Create New", "Create")
</p>
<p>
    @using (Html.BeginForm("Index", "Gamer", FormMethod.Get))
    {
        <b>Search By:</b><br />
        @Html.RadioButton("searchBy", "Name", true) <text>Name</text>
        @Html.RadioButton("searchBy", "Gender") <text>Gender</text><br />
        @Html.TextBox("searchText") <br />
        <input type="submit" value="Go" />
    }
</p>
<table class="table">
    <tr>
        <th>
            @* @Html.DisplayNameFor(model => model.Name) *@
            @* @Html.DisplayNameFor(model => model.First().Name) *@
            @Html.ActionLink("Name", "Index", new
            {

```

```

        sortBy = ViewBag.NameSort,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"],
    })
    @*<a href="/?sortBy=Name%20desc">Name</a>*@
</th>
<th>
    @*@Html.DisplayNameFor(model => model.Gender)*@
    @*@Html.DisplayNameFor(model => model.First().Gender)*@
    @Html.ActionLink("Gender", "Index", new
    {
        sortBy = ViewBag.GenderSort,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"],
    })
    @*<a href="/?sortBy=Gender">Gender</a>*@
</th>
<th>
    @*@Html.DisplayNameFor(model => model.EmailAddress)*@
    @Html.DisplayNameFor(model => model.First().EmailAddress)
</th>
<th>
    Action
</th>
</tr>
@if (!Model.Any())
{
    <tr>
        <td colspan="4">
            No matched records.
        </td>
    </tr>
}
@foreach (var item in Model)
{
    <tr>
        <td>
            @Html.DisplayFor(modelItem => item.Name)
        </td>
        <td>
            @Html.DisplayFor(modelItem => item.Gender)
        </td>
        <td>
            @Html.DisplayFor(modelItem => item.EmailAddress)
        </td>
        <td>
            @Html.ActionLink("Edit", "Edit", new { id = item.Id }) |
            @Html.ActionLink("Details", "Details", new { id = item.Id }) |
            @Html.ActionLink("Delete", "Delete", new { id = item.Id })
        </td>
    </tr>
}
</table>
@*@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
    new
    {
        //pageNumber = pageNumber,

```

```

        pageNumber,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"]
    )))*@
@*@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
    new
    {
        //pageNumber = pageNumber,
        pageNumber,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"]
    })),
    new PagedListRenderOptions{ Display = PagedListDisplayMode.IfNeeded })*@
@*@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
    new
    {
        //pageNumber = pageNumber,
        pageNumber,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"]
    })),
    new PagedListRenderOptions
    {
        Display = PagedListDisplayMode.IfNeeded,
        DisplayPageCountAndCurrentLocation = true
    })*@
@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
    new
    {
        //pageNumber = pageNumber,
        pageNumber,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"],
        sortBy = Request["sortBy"] //Request from ViewBag
    })),
    new PagedListRenderOptions
    {
        Display = PagedListDisplayMode.IfNeeded,
        DisplayPageCountAndCurrentLocation = true,
        DisplayItemSliceAndTotal = true
    })
@*
1.
//@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
//    new {
//        //pageNumber = pageNumber,
//        pageNumber,
//        searchBy = Request.QueryString["searchBy"],
//        searchText = Request.QueryString["searchText"] })))
1.1.
The PagedListPager() 1st parameter is IPagedList
which is the collection of gamers of current page.
1.2.
The PagedListPager() 2nd parameter is Func<int,string> generatePageURL
which we use Url.Action() to generate the Func<int,string>.
In this case, Func<int,string> means that
the input parameter is int, and the output is a string.
1.2.1.
The input parameter is the pageNumber which comes from the query string.
1.2.2.
The output is a string which is the generatePageURL.
In this case, it is Url.Action().
1.2.2.1.
The Url.Action() 1st parameter is action name which is "Index" action.
1.2.2.2.
The Url.Action() 2nd parameter is the route value.

```

1.2.2.2.1.

searchBy parameter should come from the query string, Request.QueryString["searchBy"].

1.2.2.2.2.

searchText parameter should come from the query string, Request.QueryString["searchText"].

1.3.

It will display the page number even there is only one page.

-----

2.

```
//@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
//    new
//    {
//        //pageNumber = pageNumber,
//        pageNumber,
//        searchBy = Request.QueryString["searchBy"],
//        searchText = Request.QueryString["searchText"]
//    }),
//    new PagedListRenderOptions{ Display = PagedListDisplayMode.IfNeeded })
```

2.1.

//Display = PagedListDisplayMode.IfNeeded,

It will hide the page number when there is only one page,

because only one page means no need paging.

-----

3.

```
//@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
//    new
//    {
//        //pageNumber = pageNumber,
//        pageNumber,
//        searchBy = Request.QueryString["searchBy"],
//        searchText = Request.QueryString["searchText"]
//    }),
//    new PagedListRenderOptions
//    {
//        Display = PagedListDisplayMode.IfNeeded,
//        DisplayPageCountAndCurrentLocation = true
//    })
```

3.1.

//Display = PagedListDisplayMode.IfNeeded,

It will hide the page number when there is only one page,

because only one page means no need paging.

3.2.

//DisplayPageCountAndCurrentLocation = true

It will display "Page 1 of 3"

-----

4.

```
//@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
//    new
//    {
//        //pageNumber = pageNumber,
//        pageNumber,
//        searchBy = Request.QueryString["searchBy"],
//        searchText = Request.QueryString["searchText"]
//    }),
//    new PagedListRenderOptions
//    {
//        Display = PagedListDisplayMode.IfNeeded,
//        DisplayPageCountAndCurrentLocation = true,
//        DisplayItemSliceAndTotal = true
//    })
```

4.1.

//Display = PagedListDisplayMode.IfNeeded,

It will hide the page number when there is only one page,

because only one page means no need paging.

4.2.

//DisplayPageCountAndCurrentLocation = true

It will display "Page 1 of 3"

4.3.

```
//DisplayItemSliceAndTotal = true
It will display "Showing items 6 through 7 of 7"
-----
5.
//@Html.ActionLink("Name", "Index", new
// {
//     sortBy = ViewBag.NameSort,
//     searchBy = Request.QueryString["searchBy"],
//     searchText = Request.QueryString["searchText"],
// })
...
//@Html.ActionLink("Gender", "Index", new
// {
//     sortBy = ViewBag.GenderSort,
//     searchBy = Request.QueryString["searchBy"],
//     searchText = Request.QueryString["searchText"],
// })
5.1.
When http://localhost:52319/Gamer/Index
//<a href="/?sortBy=Name%20desc">Name</a>
//<a href="/?sortBy=Gender">Gender</a>
5.2.
http://localhost:52319/?searchBy=Gender&searchText=Male
//<a href="/?sortBy=Name%20desc">Name</a>
//<a href="/?sortBy=Gender">Gender</a>
5.3.
http://localhost:52319/?sortBy=Name%20desc&searchBy=Gender&searchText=Male
//<a href="/?searchBy=Gender&searchText=Male">Name</a>
//<a href="/?sortBy=Gender&searchBy=Gender&searchText=Male">Gender</a>
*@
```

## 6.3. Run Search Bar, paging, and Sorting

When

<http://localhost:52319/Gamer/Index>

```
//<a href="/?sortBy=Name%20desc">Name</a>
```

```
//<a href="/?sortBy=Gender">Gender</a>
```

### Gamer Index

[Create New](#)

Search By:

☒ Name ☐ Gender

Go

Name	Gender	EmailAddress	Action
Name01 ABB	Male	1@AAA.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name01 HFSASER	Male	11@AAA.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name02 CDDE	Female	2@BBB.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name03 FIJK	Female	3@CCCC.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name04 LMOPPQ	Male	4@DD.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>



When

<http://localhost:52319/?searchBy=Gender&searchText=Male>

//<a href="/?sortBy=Name%20desc">Name</a>

//<a href="/?sortBy=Gender">Gender</a>

## Gamer Index

[Create New](#)

Search By:

☐ Name ☒ Gender

Male

Go

Name	Gender	EmailAddress	Action
Name01 ABB	Male	1@AAA.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name01 HFSASER	Male	11@AAA.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name04 LMOPPQ	Male	4@DD.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name05 QRSTT	Male	5@EEE.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name08 ABBCDE	Male	8@HH.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

Page 1 of 3.

Showing items 1 through 5 of 12.

1

2

3

»

When

<http://localhost:52319/?sortBy=Name%20desc&searchBy=Gender&searchText=Male>

//<a href="/?searchBy=Gender&searchText=Male">Name</a>

//<a href="/?sortBy=Gender&searchBy=Gender&searchText=Male">Gender</a>

# Gamer Index

[Create New](#)

Search By:

☐ Name ☒ Gender

Male

Go

Name	Gender	EmailAddress	Action
Name20 HHFWSWQ	Male	20@XXWFFS.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name19 QRSTTUVXX	Male	19@IIII.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name18 BBFSAQ	Male	18@HH.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name15 WWVFSSQ	Male	15@EEE.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Name14 BBGVDD	Male	14@DD.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

Page 1 of 3. Showing items 1 through 5 of 12. [1](#) [2](#) [3](#) [»](#)

## 7. OnlineGame.Web - Check box delete All

### 7.1. Controllers/GamerController.cs

```
[HttpPost]
public async Task<ActionResult> DeleteMultiple(IEnumerable<int>
GamerIdsToDelete, string searchBy, string searchText, int? pageNumber, string sortBy)
{
    //Delete a list of gamers
    List<Gamer> gamers = await db.Gamers.Where(g=> GamerIdsToDelete.Contains(g.Id)).ToListAsync();
    gamers.ForEach(g => db.Gamers.Remove(g));
    await db.SaveChangesAsync();
    return RedirectToAction("Index", new{ searchBy, searchText, pageNumber, sortBy });
}
```

### 7.2. Views/Gamer/Index.cshtml

```
@using OnlineGame.Web.Models
@using PagedList
@using PagedList.Mvc
@*@model IEnumerable<Gamer>*@
@model IPagedList<Gamer>
@{
    ViewBag.Title = "Gamer Index";
}
```

```

<h2>@ViewBag.Title</h2>
<p>
    @Html.ActionLink("Create New", "Create")
</p>
<p>
    @using (Html.BeginForm("Index", "Gamer", FormMethod.Get))
    {
        <b>Search By:</b><br />
        @Html.RadioButton("searchBy", "Name", true) <text>Name</text>
        @Html.RadioButton("searchBy", "Gender") <text>Gender</text><br />
        @Html.TextBox("searchText") <br />
        <input type="submit" value="Go" />
    }
</p>
@using (Html.BeginForm("DeleteMultiple", "Gamer", new
{
    searchBy = Request.QueryString["searchBy"],
    searchText = Request.QueryString["searchText"],
    pageNumber = Request.QueryString["pageNumber"],
    sortBy = Request["sortBy"] //Request from ViewBag
}, FormMethod.Post))
{
<table class="table">
    <tr>
        <th></th>
        <th>
            @*@Html.DisplayNameFor(model => model.Name)*@
            @*@Html.DisplayNameFor(model => model.First().Name)*@
            @Html.ActionLink("Name", "Index", new
            {
                sortBy = ViewBag.NameSort,
                searchBy = Request.QueryString["searchBy"],
                searchText = Request.QueryString["searchText"],
            })
            @*<a href="/?sortBy=Name%20desc">Name</a>*@
        </th>
        <th>
            @*@Html.DisplayNameFor(model => model.Gender)*@
            @*@Html.DisplayNameFor(model => model.First().Gender)*@
            @Html.ActionLink("Gender", "Index", new
            {
                sortBy = ViewBag.GenderSort,
                searchBy = Request.QueryString["searchBy"],
                searchText = Request.QueryString["searchText"],
            })
            @*<a href="/?sortBy=Gender">Gender</a>*@
        </th>
        <th>
            @*@Html.DisplayNameFor(model => model.EmailAddress)*@
            @Html.DisplayNameFor(model => model.First().EmailAddress)
        </th>
        <th>
            Action
        </th>
    </tr>
    @if (!Model.Any())
    {
        <tr>

```

```

        <td colspan="5">
            No matched records.
        </td>
    </tr>
}
@foreach (Gamer item in Model)
{
    <tr>
        <td>
            <input type="checkbox" name="GamerIdsToDelete" id="GamerIdsToDelete" value="@item.Id" />
        </td>
        <td>
            @Html.DisplayFor(modelItem => item.Name)
        </td>
        <td>
            @Html.DisplayFor(modelItem => item.Gender)
        </td>
        <td>
            @Html.DisplayFor(modelItem => item.EmailAddress)
        </td>
        <td>
            @Html.ActionLink("Edit", "Edit", new { id = item.Id }) |
            @Html.ActionLink("Details", "Details", new { id = item.Id }) |
            @Html.ActionLink("Delete", "Delete", new { id = item.Id })
        </td>
    </tr>
}
<tr>
    <td colspan="5">
        <input type="submit" value="Delete Selected" />
    </td>
</tr>
</table>
}
@* @Html.PagedListPager(Model, pageNumber => Url.Action("Index",
    new
    {
        //pageNumber = pageNumber,
        pageNumber,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"]
    }))*@
@* @Html.PagedListPager(Model, pageNumber => Url.Action("Index",
    new
    {
        //pageNumber = pageNumber,
        pageNumber,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"]
    })),
    new PagedListRenderOptions{ Display = PagedListDisplayMode.IfNeeded })*@
@* @Html.PagedListPager(Model, pageNumber => Url.Action("Index",
    new
    {
        //pageNumber = pageNumber,
        pageNumber,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"]
    })),
    new PagedListRenderOptions

```

```

    {
        Display = PagedListDisplayMode.IfNeeded,
        DisplayPageCountAndCurrentLocation = true
    })*@
@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
    new
    {
//pageNumber = pageNumber,
pageNumber,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"],
        sortBy = Request["sortBy"] //Request from ViewBag
    })),
    new PagedListRenderOptions
    {
        Display = PagedListDisplayMode.IfNeeded,
        DisplayPageCountAndCurrentLocation = true,
        DisplayItemSliceAndTotal = true
    })
@*

```

```

1.
//@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
//    new {
//        //pageNumber = pageNumber,
//        pageNumber,
//        searchBy = Request.QueryString["searchBy"],
//        searchText = Request.QueryString["searchText"] })))
1.1.
The PagedListPager() 1st parameter is IPagedList
which is the collection of gamers of current page.
1.2.
The PagedListPager() 2nd parameter is Func<int,string> generatePageURL
which we use Url.Action() to generate the Func<int,string>.
In this case, Func<int,string> means that
the input parameter is int, and the output is a string.
1.2.1.
The input parameter is the pageNumber which comes from the query string.
1.2.2.
The output is a string which is the generatePageURL.
In this case, it is Url.Action().
1.2.2.1.
The Url.Action() 1st parameter is action name which is "Index" action.
1.2.2.2.
The Url.Action() 2nd parameter is the route value.
1.2.2.2.1.
searchBy parameter should come from the query string, Request.QueryString["searchBy"].
1.2.2.2.2.
searchText parameter should come from the query string, Request.QueryString["searchText"].
1.3.
It will display the page number even there is only one page.
-----
2.
//@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
//    new
//    {
//        //pageNumber = pageNumber,
//        pageNumber,
//        searchBy = Request.QueryString["searchBy"],
//        searchText = Request.QueryString["searchText"]
//    })),
//    new PagedListRenderOptions{ Display = PagedListDisplayMode.IfNeeded })
2.1.
//Display = PagedListDisplayMode.IfNeeded,
It will hide the page number when there is only one page,
because only one page means no need paging.
-----

```

```

3.
//@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
//    new
//    {
//        //pageNumber = pageNumber,
//        pageNumber,
//        searchBy = Request.QueryString["searchBy"],
//        searchText = Request.QueryString["searchText"]
//    }),
//    new PagedListRenderOptions
//    {
//        Display = PagedListDisplayMode.IfNeeded,
//        DisplayPageCountAndCurrentLocation = true
//    })
3.1.
//Display = PagedListDisplayMode.IfNeeded,
It will hide the page number when there is only one page,
because only one page means no need paging.
3.2.
//DisplayPageCountAndCurrentLocation = true
It will display "Page 1 of 3"
-----
4.
//@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
//    new
//    {
//        //pageNumber = pageNumber,
//        pageNumber,
//        searchBy = Request.QueryString["searchBy"],
//        searchText = Request.QueryString["searchText"]
//    }),
//    new PagedListRenderOptions
//    {
//        Display = PagedListDisplayMode.IfNeeded,
//        DisplayPageCountAndCurrentLocation = true,
//        DisplayItemSliceAndTotal = true
//    })
4.1.
//Display = PagedListDisplayMode.IfNeeded,
It will hide the page number when there is only one page,
because only one page means no need paging.
4.2.
//DisplayPageCountAndCurrentLocation = true
It will display "Page 1 of 3"
4.3.
//DisplayItemSliceAndTotal = true
It will display "Showing items 6 through 7 of 7"
-----
5.
//@Html.ActionLink("Name", "Index", new
//    {
//        sortBy = ViewBag.NameSort,
//        searchBy = Request.QueryString["searchBy"],
//        searchText = Request.QueryString["searchText"],
//    })
...
//@Html.ActionLink("Gender", "Index", new
//    {
//        sortBy = ViewBag.GenderSort,
//        searchBy = Request.QueryString["searchBy"],
//        searchText = Request.QueryString["searchText"],
//    })
5.1.
When http://localhost:52319/Gamer/Index
//<a href="/?sortBy=Name%20desc">Name</a>
//<a href="/?sortBy=Gender">Gender</a>
5.2.

```

```
http://localhost:52319/?searchBy=Gender&searchText=Male
//<a href="/?sortBy=Name%20desc">Name</a>
//<a href="/?sortBy=Gender">Gender</a>
5.3.
http://localhost:52319/?sortBy=Name%20desc&searchBy=Gender&searchText=Male
//<a href="/?searchBy=Gender&searchText=Male">Name</a>
//<a href="/?sortBy=Gender&searchBy=Gender&searchText=Male">Gender</a>
*@
```

## 7.3. Run Search Bar, paging, and Sorting

<http://localhost:52319/?pageNumber=2&searchBy=Gender&searchText=Male&sortBy=Name%20desc>

### Gamer Index

[Create New](#)

Search By:

☐ Name ☒ Gender

Male

Go

	Name	Gender	EmailAddress	Action
<input type="checkbox"/>	Name11 HFSASER	Male	11@AAA.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input checked="" type="checkbox"/>	Name10 GGAAEE	Male	10@XXWFFS.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input checked="" type="checkbox"/>	Name09 QRSTTUVXX	Male	9@IIII.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input type="checkbox"/>	Name08 ABBCDE	Male	8@HH.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input type="checkbox"/>	Name05 QRSTT	Male	5@EEE.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

Delete Selected

« Page 2 of 3. Showing items 6 through 10 of 12. 1 2 3 »

<http://localhost:52319/?searchBy=Gender&searchText=Male&pageNumber=2&sortBy=Name%20desc>

# Gamer Index

[Create New](#)

Search By:

☐ Name ☒ Gender

Male

Go

	Name	Gender	EmailAddress	Action
<input type="checkbox"/>	Name11 HFSASER	Male	11@AAA.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input type="checkbox"/>	Name08 ABBCDE	Male	8@HH.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input type="checkbox"/>	Name05 QRSTT	Male	5@EEE.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input type="checkbox"/>	Name04 LMOPPQ	Male	4@DD.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input type="checkbox"/>	Name01 ABB	Male	1@AAA.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

Delete Selected

« Page 2 of 2. Showing items 6 through 10 of 10. 1 2

## 8. OnlineGame.Web - Check box delete All

### 8.1. Views/Gamer/Index.cshtml

```
@using OnlineGame.Web.Models
@using PagedList
@using PagedList.Mvc
@* @model IEnumerable<Gamer> *
@model IPagedList<Gamer>
@{
    ViewBag.Title = "Gamer Index";
}
<script src="~/Scripts/jquery-1.10.2.min.js" type="text/javascript"></script>
<script type="text/javascript" language="javascript">
    $(function () {
        $('#SelectAll').click(function () {
            $("input[name='GamerIdsToDelete']").prop("checked", this.checked);
            //1.
            //this.checked means $("#SelectAll").checked
            //if $("#SelectAll").checked==true, then
            //$("#input[name='GamerIdsToDelete']").prop("checked", true);
            //if $("#SelectAll").checked==false, then
            //$("#input[name='GamerIdsToDelete']").prop("checked", false);
        });
    });
}
```



```

        //2.
        //$("#input[name='GamerIdsToDelete']") will select all the elements which
name==GamerIdsToDelete.
        //$("#input[#GamerIdsToDelete]") will select all only one element which Id==GamerIdsToDelete.
        $("#input[name='GamerIdsToDelete']").click(function () {
            if ($("#input[name='GamerIdsToDelete']").length ===
$("#input[name='GamerIdsToDelete']:checked").length)
            {
                $("#SelectAll").prop("checked", "checked");
            }
            else {
                $("#SelectAll").removeProp("checked");
            }
        });
        //1.
        //When any of name==GamerIdsToDelete elements has been ckicked,
        //if all input[name='GamerIdsToDelete'] have been checked,
        //then the $("#SelectAll") must be checked.
        //Otherwise, the $("#SelectAll") is un-checked.
    });
    $("#btnDeleteSelected").click(function () {
        var count = $("#input[name='GamerIdsToDelete']:checked").length;
        if (count === 0) {
            alert("Please select items to delete.");
            return false;
        }
        else
        {
            return confirm(count + " row(s) will be deleted. Are you sure to continue.");
        }
    });
});
</script>
<h2>@ViewBag.Title</h2>
<p>
    @Html.ActionLink("Create New", "Create")
</p>
<p>
    @using (Html.BeginForm("Index", "Gamer", FormMethod.Get))
    {
        <b>Search By:</b><br />
        @Html.RadioButton("searchBy", "Name", true) <text>Name</text>
        @Html.RadioButton("searchBy", "Gender") <text>Gender</text><br />
        @Html.TextBox("searchText") <br />
        <input type="submit" value="Go" />
    }
</p>
@using (Html.BeginForm("DeleteMultiple", "Gamer", new
{
    searchBy = Request.QueryString["searchBy"],
    searchText = Request.QueryString["searchText"],
    pageNumber = Request.QueryString["pageNumber"],
    sortBy = Request["sortBy"] //Request from ViewBag
}, FormMethod.Post))
{
    <table class="table">
        <tr>
            <th>
                <input type="checkbox" name="SelectAll" id="SelectAll" />

```

```

        </th>
        <th>
            @*@Html.DisplayNameFor(model => model.Name)*@
            @*@Html.DisplayNameFor(model => model.First().Name)*@
            @Html.ActionLink("Name", "Index", new
            {
                sortBy = ViewBag.NameSort,
                searchBy = Request.QueryString["searchBy"],
                searchText = Request.QueryString["searchText"],
            })
            @*<a href="/?sortBy=Name%20desc">Name</a>*@
        </th>
        <th>
            @*@Html.DisplayNameFor(model => model.Gender)*@
            @*@Html.DisplayNameFor(model => model.First().Gender)*@
            @Html.ActionLink("Gender", "Index", new
            {
                sortBy = ViewBag.GenderSort,
                searchBy = Request.QueryString["searchBy"],
                searchText = Request.QueryString["searchText"],
            })
            @*<a href="/?sortBy=Gender">Gender</a>*@
        </th>
        <th>
            @*@Html.DisplayNameFor(model => model.EmailAddress)*@
            @Html.DisplayNameFor(model => model.First().EmailAddress)
        </th>
        <th>
            Action
        </th>
    </tr>
    @if (!Model.Any())
    {
        <tr>
            <td colspan="5">
                No matched records.
            </td>
        </tr>
    }
    @foreach (Gamer item in Model)
    {
        <tr>
            <td>
                <input type="checkbox" name="GamerIdsToDelete" id="GamerIdsToDelete" value="@item.Id" />
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.Name)
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.Gender)
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.EmailAddress)
            </td>
            <td>
                @Html.ActionLink("Edit", "Edit", new { id = item.Id }) |

```

```

                @Html.ActionLink("Details", "Details", new { id = item.Id }) |
                @Html.ActionLink("Delete", "Delete", new { id = item.Id })
            </td>
        </tr>
    }
    <tr>
        <td colspan="5">
            <input type="submit" value="Delete
Selected" id="btnDeleteSelected" name="btnDeleteSelected"/>
        </td>
    </tr>
</table>
}
@*@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
    new
    {
        //pageNumber = pageNumber,
        pageNumber,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"]
    }))*@
@*@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
    new
    {
        //pageNumber = pageNumber,
        pageNumber,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"]
    })),
    new PagedListRenderOptions{ Display = PagedListDisplayMode.IfNeeded })*@
@*@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
    new
    {
        //pageNumber = pageNumber,
        pageNumber,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"]
    })),
    new PagedListRenderOptions
    {
        Display = PagedListDisplayMode.IfNeeded,
        DisplayPageCountAndCurrentLocation = true
    })*@
@Html.PagedListPager(Model, pageNumber => Url.Action("Index",
    new
    {
        //pageNumber = pageNumber,
        pageNumber,
        searchBy = Request.QueryString["searchBy"],
        searchText = Request.QueryString["searchText"],
        sortBy = Request["sortBy"] //Request from ViewBag
    })),
    new PagedListRenderOptions
    {
        Display = PagedListDisplayMode.IfNeeded,
        DisplayPageCountAndCurrentLocation = true,
        DisplayItemSliceAndTotal = true
    })

```

# Gamer Index

[Create New](#)

Search By:

☒ Name ☐ Gender

Go

<input checked="" type="checkbox"/>	Name	Gender	EmailAddress	Action
<input checked="" type="checkbox"/>	Name01 ABB	Male	1@AAA.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input checked="" type="checkbox"/>	Name02 CDDE	Female	2@BBB.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input checked="" type="checkbox"/>	Name03 FIJK	Female	3@CCCC.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input checked="" type="checkbox"/>	Name04 LMOPPQ	Male	4@DD.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input checked="" type="checkbox"/>	Name06 TUVVX	Female	6@FF.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

Delete Selected

# Gamer Index

[Create New](#)

Search By:

☒ Name ☐ Gender

Go

<input type="checkbox"/>	Name	Gender	EmailAddress	Action
<input checked="" type="checkbox"/>	Name01 ABB	Male	1@AAA.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input type="checkbox"/>	Name02 CDDE	Female	2@BBB.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input checked="" type="checkbox"/>	Name03 FIJK	Female	3@CCCC.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input checked="" type="checkbox"/>	Name04 LMOPPQ	Male	4@DD.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input checked="" type="checkbox"/>	Name06 TUVVX	Female	6@FF.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

Delete Selected

# Gamer Index

[Create New](#)

Search By:

☒ Name ☐ Gender

Go

<input checked="" type="checkbox"/>	Name	Gender	EmailAddress	Action
<input checked="" type="checkbox"/>	Name01 ABB	Male	1@AAA.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input checked="" type="checkbox"/>	Name02 CDDE	Female	2@BBB.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input checked="" type="checkbox"/>	Name03 FIJK	Female	3@CCCC.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input checked="" type="checkbox"/>	Name04 LMOPPQ	Male	4@DD.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input checked="" type="checkbox"/>	Name06 TUVVX	Female	6@FF.com	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

Delete Selected

# Gamer Index

[Create New](#)

Search By:


☒ Name ☐ Gender

Go

<input type="checkbox"/>	Name				Action
<input type="checkbox"/>	Name01 ABB				<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input type="checkbox"/>	Name02 CDD				<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input type="checkbox"/>	Name03 FIJK				<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input type="checkbox"/>	Name04 LMOPPQ	Male	4@DD.com		<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
<input type="checkbox"/>	Name06 TUVVX	Female	6@FF.com		<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

Delete Selected

Message from webpage

 Please select items to delete.

OK

# Gamer Index

[Create New](#)

Search By:

☒ Name ☐ Gender

Go

<input type="checkbox"/> Name				
<input type="checkbox"/> Name01 A				<a href="#">te</a>
<input checked="" type="checkbox"/> Name02 C				<a href="#">te</a>
<input checked="" type="checkbox"/> Name03 F				<a href="#">te</a>
<input type="checkbox"/> Name04 L				<a href="#">te</a>
<input type="checkbox"/> Name06 TUVVX	Female	6@FF.com	<a href="#">Edit</a>	<a href="#">Details</a>   <a href="#">Delete</a>

Delete Selected