

(T6)討論 MvcConventions(命名規則) 。討論 EntityFramework 、BusinessLayer 的 Delete
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(T6)討論 MvcConventions(命名規則) 。討論 EntityFramework 、BusinessLayer 的 Delete

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0. Summary

In this tutorial, we will discuss

- * MvcConventions
- * AdoDotNet
- * BusinessLayer
- * Delete Data

This is continuous with the previous tutorial.

Please ensure you finish the previous tutorial before you continue this tutorial.

1. OnlineGame DB

1.1. TSQL

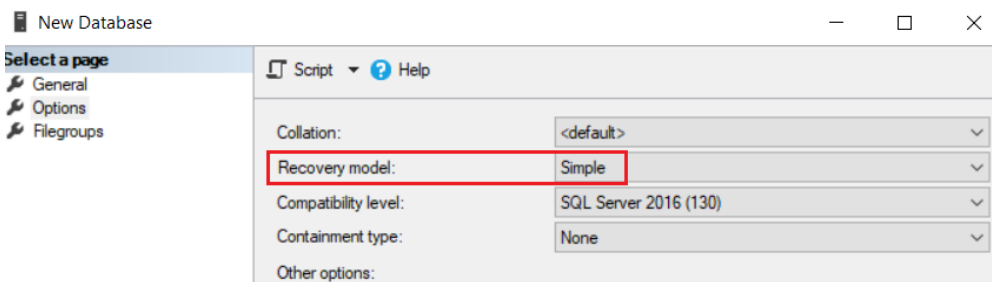
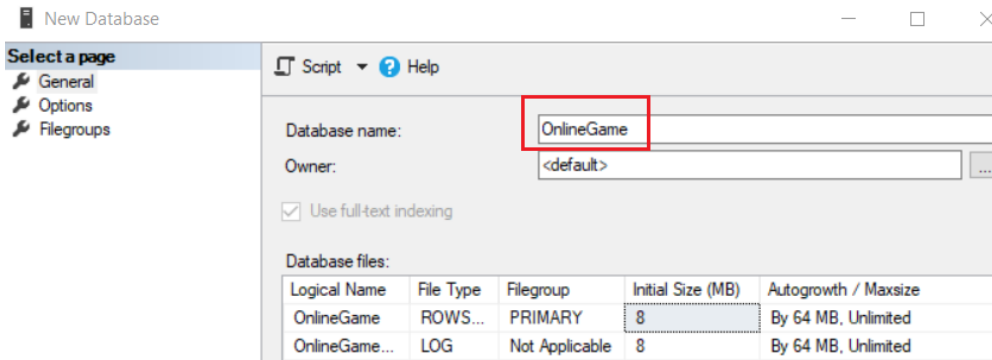
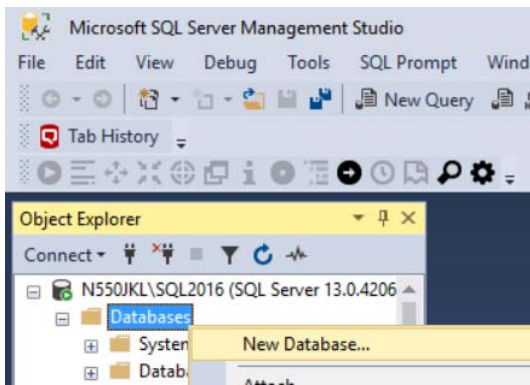
In SQL server Management Studio (SSMS)

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
IF ( EXISTS ( SELECT      *
                FROM        INFORMATION_SCHEMA.TABLES
                WHERE       TABLE_NAME = 'Team' ) )
BEGIN
    TRUNCATE TABLE Team;
    DROP TABLE Team;
END;

GO -- Run the previous command and begins new batch
--Drop Stored Procedure if it exists.
```

```

--IF OBJECT_ID('spSearchGamer') IS NOT NULL
IF ( EXISTS ( SELECT      *
                FROM        INFORMATION_SCHEMA.ROUTINES
                WHERE        ROUTINE_TYPE = 'PROCEDURE'
                            AND LEFT(ROUTINE_NAME, 3) NOT IN ( 'sp_', 'xp_', 'ms_' )
                            AND SPECIFIC_NAME = 'spGetGamers' ) )

BEGIN
    DROP PROCEDURE spGetGamers;
END;

GO -- Run the previous command and begins new batch
IF ( EXISTS ( SELECT      *
                FROM        INFORMATION_SCHEMA.ROUTINES
                WHERE        ROUTINE_TYPE = 'PROCEDURE'
                            AND LEFT(ROUTINE_NAME, 3) NOT IN ( 'sp_', 'xp_', 'ms_' )
                            AND SPECIFIC_NAME = 'spAddGamer' ) )

BEGIN
    DROP PROCEDURE spAddGamer;
END;

GO -- Run the previous command and begins new batch
IF ( EXISTS ( SELECT      *
                FROM        INFORMATION_SCHEMA.ROUTINES
                WHERE        ROUTINE_TYPE = 'PROCEDURE'
                            AND LEFT(ROUTINE_NAME, 3) NOT IN ( 'sp_', 'xp_', 'ms_' )
                            AND SPECIFIC_NAME = 'spSaveGamer' ) )

BEGIN
    DROP PROCEDURE spSaveGamer;
END;

GO -- Run the previous command and begins new batch
IF ( EXISTS ( SELECT      *
                FROM        INFORMATION_SCHEMA.ROUTINES
                WHERE        ROUTINE_TYPE = 'PROCEDURE'
                            AND LEFT(ROUTINE_NAME, 3) NOT IN ( 'sp_', 'xp_', 'ms_' )
                            AND SPECIFIC_NAME = 'spDeleteGamer' ) )

BEGIN
    DROP PROCEDURE spDeleteGamer;
END;

GO -- Run the previous command and begins new batch
--2. Create Table
CREATE TABLE Team
(
    Id INT PRIMARY KEY
        IDENTITY(1, 1)
        NOT NULL ,
    [Name] NVARCHAR(100) NULL
);

GO -- Run the previous command and begins new batch
CREATE TABLE Gamer
(
    Id INT PRIMARY KEY
        IDENTITY(1, 1)
        NOT NULL ,
    [Name] NVARCHAR(100) NULL ,
    Gender NVARCHAR(10) NULL ,

```

```

City NVARCHAR(50) NULL ,
DateOfBirth DATETIME NULL ,
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 LMOPPQ', 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 ABCDE', N'Male', N'City02', '1985/7/28', 1 );
INSERT Gamer
VALUES ( N'Name09 QRSTTUVXX', N'Male', N'City02', '1983/4/16', 1 );
GO -- Run the previous command and begins new batch
--4. SP
CREATE PROCEDURE spGetGamers
AS
BEGIN
    SELECT *
    FROM Gamer;
END;
GO -- Run the previous command and begins new batch
CREATE PROCEDURE spAddGamer
(
    @Name NVARCHAR(50) ,
    @Gender NVARCHAR(10) ,
    @City NVARCHAR(50) ,
    @DateOfBirth DateTime ,
    @TeamId INT
)
AS
BEGIN
    INSERT INTO Gamer
    VALUES ( @Name, @Gender, @City, @DateOfBirth, @TeamId );
END;
GO -- Run the previous command and begins new batch
CREATE PROCEDURE spSaveGamer
(
    @Id INT ,

```

```

        @Name NVARCHAR(50) ,
        @Gender NVARCHAR(10) ,
        @City NVARCHAR(50) ,
        @DateOfBirth DateTime ,
        @TeamId INT
    )
AS
BEGIN
    UPDATE dbo.Gamer
    SET     Name = @Name ,
           Gender = @Gender ,
           City = @City ,
           DateOfBirth = @DateOfBirth ,
           TeamId = @TeamId
    WHERE   Id = @Id;
END;
GO -- Run the previous command and begins new batch
CREATE PROCEDURE spDeleteGamer ( @Id int )
AS
BEGIN
    DELETE FROM Gamer
    WHERE   Id = @Id;
END;
GO -- Run the previous command and begins new batch
--EXEC spGetGamers
--GO -- Run the previous command and begins new batch

```

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

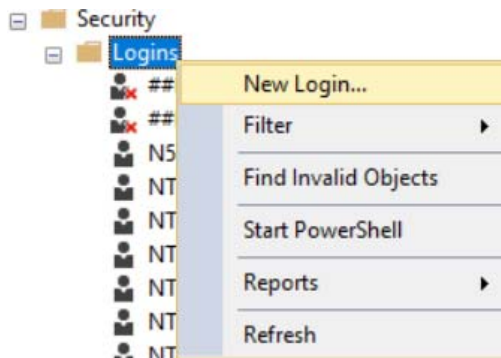
sysadmin

-->

User Mapping Tab

Select **OnlineGame**

Select every single role.



The 'Login - New' dialog box is shown with the 'SQL Server authentication' radio button selected. The 'Login name' field contains 'Tester'. The 'Password' and 'Confirm password' fields are masked with dots. The 'Enforce password policy', 'Enforce password expiration', and 'User must change password at next login' checkboxes are all checked. The 'Default database' is set to 'Sample.' and the 'Default language' is set to '<default>'. The 'OK' button is highlighted with a blue border.

Select a page

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

Connection

Server: N550JKL\SQL2016
Connection: N550JKL\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

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

Connection

Server:
N550JKL\SQL2016

Connection:
N550JKL\pmp1

View connection properties

Progress

Ready

OK

Cancel

Login Properties - Tester

Select a page

General

Server Roles

User Mapping

Securables

Status

Script

Help

Users mapped to this login:

Map	Database	User	Default Schema
<input type="checkbox"/>	Movie3		
<input type="checkbox"/>	NORTHWND		
<input type="checkbox"/>	Northwind		
<input type="checkbox"/>	Report.Server\$SQL2016		
<input type="checkbox"/>	Report.Server\$SQL20...		
<input checked="" type="checkbox"/>	Sample	Tester	dbo
<input type="checkbox"/>	master		
<input type="checkbox"/>	model		
<input type="checkbox"/>	msdb		
<input type="checkbox"/>	tempdb		

Guest account enabled for: Sample

Database role membership for: Sample

☒ db_accessadmin

☒ db_backupoperator

☒ db_datareader

☒ db_datawriter

☒ db_ddladmin

☒ db_denydatareader

☒ db_denydatawriter

☒ db_owner

☒ db_securityadmin

☒ public

Connection

Server:
N550JKL\SQL2016

Connection:
N550JKL\pmp1

View connection properties

Progress

Ready

OK

Cancel

2. BusinessLayer

2.1. BusinessLayer/GamerBusinessLayer.cs

```
using System;
using System.Collections.Generic;
using System.Configuration;
using System.Data;
using System.Data.SqlClient;
namespace BusinessLayer
{
    public class GamerBusinessLayer
    {
        public IEnumerable<Gamer> Gamers
        {
            get
            {
                string connectionString =
                    ConfigurationManager.ConnectionStrings["OnlineGameContext"].ConnectionString;
                List<Gamer> gamers = new List<Gamer>();
                using (SqlConnection con = new SqlConnection(connectionString))
                {
                    SqlCommand cmd = new SqlCommand("spGetGamers", con);
                    cmd.CommandType = CommandType.StoredProcedure;
                    con.Open();
                    SqlDataReader rdr = cmd.ExecuteReader();
                    while (rdr.Read())
                    {
                        Gamer gamer = new Gamer();
                        gamer.Id = Convert.ToInt32(rdr["Id"]);
                        gamer.Name = rdr["Name"].ToString();
                        gamer.Gender = rdr["Gender"].ToString();
                        gamer.City = rdr["City"].ToString();
                        gamer.DateOfBirth = Convert.ToDateTime(rdr["DateOfBirth"]);
                        gamer.TeamId = Convert.ToInt32(rdr["TeamId"]);
                        gamers.Add(gamer);
                    }
                }
                return gamers;
            }
        }

        public void AddGamer(Gamer gamer)
        {
            string connectionString =
                ConfigurationManager.ConnectionStrings["OnlineGameContext"].ConnectionString;
            using (SqlConnection con = new SqlConnection(connectionString))
            {
                SqlCommand cmd = new SqlCommand("spAddGamer", con)
                {
                    CommandType = CommandType.StoredProcedure
                };
                SqlParameter sqlParamName = new SqlParameter
                {
```



```

        ParameterName = "@Name",
        Value = gamer.Name
    };
    cmd.Parameters.Add(sqlParamName);
    SqlParameter sqlParamGender = new SqlParameter
    {
        ParameterName = "@Gender",
        Value = gamer.Gender
    };
    cmd.Parameters.Add(sqlParamGender);
    SqlParameter sqlParamCity = new SqlParameter
    {
        ParameterName = "@City",
        Value = gamer.City
    };
    cmd.Parameters.Add(sqlParamCity);
    SqlParameter sqlParamDateOfBirth = new SqlParameter
    {
        ParameterName = "@DateOfBirth",
        Value = gamer.DateOfBirth
    };
    cmd.Parameters.Add(sqlParamDateOfBirth);
    SqlParameter sqlParamTeamId = new SqlParameter
    {
        ParameterName = "@TeamId",
        Value = gamer.TeamId
    };
    cmd.Parameters.Add(sqlParamTeamId);
    con.Open();
    cmd.ExecuteNonQuery();
}
}

```

```

public void SaveGamer(Gamer gamer)
{
    string connectionString =
        ConfigurationManager.ConnectionStrings["OnlineGameContext"].ConnectionString;
    using (SqlConnection con = new SqlConnection(connectionString))
    {
        SqlCommand cmd = new SqlCommand("spSaveGamer", con)
        {
            CommandType = CommandType.StoredProcedure
        };
        SqlParameter sqlParamId = new SqlParameter
        {
            ParameterName = "@Id",
            Value = gamer.Id
        };
        cmd.Parameters.Add(sqlParamId);
        SqlParameter sqlParamName = new SqlParameter
        {
            ParameterName = "@Name",
            Value = gamer.Name
        };
        cmd.Parameters.Add(sqlParamName);
        SqlParameter sqlParamGender = new SqlParameter
        {
            ParameterName = "@Gender",
            Value = gamer.Gender
        };
    };
}

```

```

        cmd.Parameters.Add(sqlParamGender);
        SqlParameter sqlParamCity = new SqlParameter
        {
            ParameterName = "@City",
            Value = gamer.City
        };
        cmd.Parameters.Add(sqlParamCity);
        SqlParameter sqlParamDateOfBirth = new SqlParameter
        {
            ParameterName = "@DateOfBirth",
            Value = gamer.DateOfBirth
        };
        cmd.Parameters.Add(sqlParamDateOfBirth);
        SqlParameter sqlParamTeamId = new SqlParameter
        {
            ParameterName = "@TeamId",
            Value = gamer.TeamId
        };
        cmd.Parameters.Add(sqlParamTeamId);
        con.Open();
        cmd.ExecuteNonQuery();
    }
}

public void DeleteGamer(int id)
{
    string connectionString =
        ConfigurationManager.ConnectionStrings["OnlineGameContext"].ConnectionString;
    using (SqlConnection con = new SqlConnection(connectionString))
    {
        SqlCommand cmd = new SqlCommand("spDeleteGamer", con);
        cmd.CommandType = CommandType.StoredProcedure;
        SqlParameter sqlParamId = new SqlParameter
        {
            ParameterName = "@Id",
            Value = id
        };
        cmd.Parameters.Add(sqlParamId);
        con.Open();
        cmd.ExecuteNonQuery();
    }
}
}
}
}

```

3. OnlineGame.Web

3.1. OnlineGame.Web/Controllers/GamerController.cs

```

using System;
using System.Collections.Generic;
using System.Linq;
using System.Web.Mvc;
using BusinessLayer;
using OnlineGame.Web.Data;

```

```

using Gamer = OnlineGame.Web.Models.Gamer;
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);
        }
        //Entity Framework
        public ActionResult Index(int teamId)
        {
            //Entity Framework
            OnlineGameContext context = new OnlineGameContext();
            List<Gamer> gamers = context.Gamers.Where(gamer => gamer.TeamId == teamId).ToList();
            return View(gamers);
        }
        //Ado.Net
        public ActionResult Index2()
        {
            //Ado.Net

```

```

        GamerBusinessLayer gamerBusinessLayer = new GamerBusinessLayer();
        List<BusinessLayer.Gamer> gamers = gamerBusinessLayer.Gamers.ToList();
        return View(gamers);
    }
    //Ado.Net
    //[HttpGet] attribute means it only respond to the "GET" request.
    [HttpGet]
    public ActionResult Create()
    {
        return View();
    }
    //Ado.Net
    // 1. Retrieve form data using FormCollection
    [HttpPost]
    public ActionResult Create(FormCollection formCollection)
    {
        ////FormCollection implement C# indexer.
        ////See each key and value of formCollection.
        //foreach (string key in formCollection.AllKeys)
        //{
        //    Response.Write($"key=={key}, {formCollection[key]}, <br/>");
        //}
        int teamId;
        BusinessLayer.Gamer gamer = new BusinessLayer.Gamer
        {
            Name = formCollection["Name"],
            Gender = formCollection["Gender"],
            City = formCollection["City"],
            DateOfBirth = Convert.ToDateTime(formCollection["DateOfBirth"]),
            TeamId = int.TryParse(formCollection["TeamId"], out teamId) ? teamId : 0
        };
        GamerBusinessLayer gamerBusinessLayer =
            new GamerBusinessLayer();
        gamerBusinessLayer.AddGamer(gamer);
        return RedirectToAction("Index2");
    }
}

```

```

//Ado.Net
// 2. Retrieve form data using name attribute of input tag from cshtml
[HttpPost]
public ActionResult Create2(string name, string gender, string city, DateTime dateOfBirth, int teamId)
{
    BusinessLayer.Gamer gamer = new BusinessLayer.Gamer
    {
        Name = name,
        Gender = gender,
        City = city,
        DateOfBirth = dateOfBirth,
        TeamId = teamId
    };
    GamerBusinessLayer gamerBusinessLayer =
        new GamerBusinessLayer();
    gamerBusinessLayer.AddGamer(gamer);
    return RedirectToAction("Index2");
}
//Ado.Net

```

```

// 3. Retrieve form data using model binding
[HttpPost]
public ActionResult Create3(BusinessLayer.Gamer gamer)
{
    //if any of input is not valid.
    if (!ModelState.IsValid)
    {
        return View("Create");
        //Go to Create.cshtml,
        //so users can correct their input value.
    }
    GamerBusinessLayer gamerBusinessLayer =
        new GamerBusinessLayer();
    gamerBusinessLayer.AddGamer(gamer);
    return RedirectToAction("Index2");
}
//Ado.Net
// 4. Retrieve form data using model binding by UpdateModel() or TryUpdateModel()
[HttpPost]
[ActionName("Create4")]
public ActionResult Create_Post()
{
    //if any of input is not valid.
    if (!ModelState.IsValid)
    {
        return View("Create");
        //Go to Create.cshtml,
        //so users can correct their input value.
    }
    GamerBusinessLayer gamerBusinessLayer =
        new GamerBusinessLayer();
    BusinessLayer.Gamer gamer = new BusinessLayer.Gamer();
    //UpdateModel<BusinessLayer.Gamer>(gamer);
    //UpdateModel(gamer);
    TryUpdateModel(gamer);
    //1.
    // UpdateModel() and TryUpdateModel() inspects all the HttpRequest inputs
    // such as posted Form data, QueryString,
    // Cookies and Server variables and populate the gamer object.
    gamerBusinessLayer.AddGamer(gamer);
    return RedirectToAction("Index2");
}

//Ado.Net
//[HttpGet] attribute means it only respond to the "GET" request.
[HttpGet]
public ActionResult Edit(int id)
{
    GamerBusinessLayer gamerBusinessLayer = new GamerBusinessLayer();
    BusinessLayer.Gamer gamer = gamerBusinessLayer.Gamers.Single(g => g.Id == id);
    return View(gamer);
}
//Ado.Net
//1.
//Edit by Model binding will open the back door for unintended update.
[HttpPost]

```

```

public ActionResult Edit(BusinessLayer.Gamer gamer)
{
    if (!ModelState.IsValid)
    {
        return View(gamer);
    }
    GamerBusinessLayer gamerBusinessLayer =
        new GamerBusinessLayer();
    gamerBusinessLayer.SaveGamer(gamer);
    return RedirectToAction("Index2");
}
//Ado.Net
//2.
//Solved the unintended update.
//Edit by UpdateModel() and TryUpdateModel()
[HttpPost]
[ActionName("Edit2")]
public ActionResult Edit_Post(int id)
{
    GamerBusinessLayer gamerBusinessLayer =
        new GamerBusinessLayer();
    BusinessLayer.Gamer gamer = gamerBusinessLayer.Gamers.Single(g => g.Id == id);
    //1.
    ////UpdateModel(gamer, new[] { "Id", "Gender", "City", "DateOfBirth", "TeamId" });
    //The second parameter of UpdateModel() and TeyUpdateModel() is included properties.
    //In this case, it will only update the following properties into model.
    //"Id", "Gender", "City", "DateOfBirth", "TeamId"
    //The Name property is not included so it will not be updated.
    //2.
    ////UpdateModel(gamer, null, null, new[] { "Name" });
    //update all properties except Name property
    UpdateModel(gamer, null, null, new[] { "Name" });
    if (!ModelState.IsValid)
    {
        return View("Edit", gamer);
    }
    gamerBusinessLayer.SaveGamer(gamer);
    return RedirectToAction("Index2");
}

```

```

//Ado.Net
//3.
//Solved the unintended update.
//Edit by Model binding with Bind include attribute
[HttpPost]
public ActionResult Edit3([Bind(Include = "Id, Gender, City, DateOfBirth,
TeamId")]BusinessLayer.Gamer gamer)
{
    GamerBusinessLayer gamerBusinessLayer =
        new GamerBusinessLayer();
    gamer.Name = gamerBusinessLayer.Gamers.Single(g => g.Id == gamer.Id).Name;
    if (!ModelState.IsValid)
    {
        return View("Edit", gamer);
    }
}

```

```

    }
    gamerBusinessLayer.SaveGamer(gamer);
    return RedirectToAction("Index2");
}
//Ado.Net
//4.
//Solved the unintended update.
//Edit by Model binding with Bind exclude attribute
[HttpPost]
public ActionResult Edit4([Bind(Exclude = "Name")]BusinessLayer.Gamer gamer)
{
    GamerBusinessLayer gamerBusinessLayer =
        new GamerBusinessLayer();
    gamer.Name = gamerBusinessLayer.Gamers.Single(g => g.Id == gamer.Id).Name;
    if (!ModelState.IsValid)
    {
        return View("Edit", gamer);
    }
    gamerBusinessLayer.SaveGamer(gamer);
    return RedirectToAction("Index2");
}
//Ado.Net
//5.
//Solved the unintended update.
//Edit by UpdateModel() and TryUpdateModel() with Interface
[HttpPost]
public ActionResult Edit5(int id)
{
    GamerBusinessLayer gamerBusinessLayer =
        new GamerBusinessLayer();
    BusinessLayer.Gamer gamer = gamerBusinessLayer.Gamers.Single(g => g.Id == id);
    //1.
    ///TryUpdateModel(gamer, new[] { "Id", "Gender", "City", "DateOfBirth", "TeamId" });
    ///UpdateModel(gamer, new[] { "Id", "Gender", "City", "DateOfBirth", "TeamId" });
    //The second parameter of UpdateModel() and TeyUpdateModel() is included properties.
    //In this case, it will only update the following properties into model.
    //"Id", "Gender", "City", "DateOfBirth", "TeamId"
    //The Name property is not included so it will not be updated.
    //2.
    ///TryUpdateModel(gamer, null, null, new[] { "Name" });
    ///UpdateModel(gamer, null, null, new[] { "Name" });
    //update all properties except Name property
    //3.
    ///TryUpdateModel<IGamer>(gamer);
    ///UpdateModel<IGamer>(gamer);
    //The UpdateModel() function will update only the properties
    //that are present in the interface.
    UpdateModel<IGamer>(gamer);
    if (!ModelState.IsValid)
    {
        return View("Edit", gamer);
    }
    gamerBusinessLayer.SaveGamer(gamer);
    return RedirectToAction("Index2");
}

```

```

//ADO.Net
//There is a security hole if Deleting database records by GET request
//E.g.
//It is wrong
//when search engines issue a GET request to index the page,
//that GET request also delete the data.
//GET request should not change the state or have any side-effects.
public ActionResult Delete2(int id)
{
    GamerBusinessLayer gamerBusinessLayer =
        new GamerBusinessLayer();
    gamerBusinessLayer.DeleteGamer(id);
    return RedirectToAction("Index2");
}
//ADO.Net
[HttpPost]
public ActionResult Delete(int id)
{
    GamerBusinessLayer gamerBusinessLayer =
        new GamerBusinessLayer();
    gamerBusinessLayer.DeleteGamer(id);
    return RedirectToAction("Index2");
}
}
}

```

```

/*
1.
//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 the temp place to store Gamer Table entity data.
-----

```

```

2.
//[HttpGet]
//public ActionResult Create()
The GET request will direct to Views/Gamer/Create.cshtml.

```

```

-----
3.
//[HttpPost]
//Create
-----
3.1.
//[HttpPost]
//public ActionResult Create(FormCollection formCollection)
Retrieve form data using FormCollection.
The key is the name attribute of input or select tag from cshtml.
-----
3.2.

```



```
//[HttpPost]
//public ActionResult Create2(string name, string gender, string city, DateTime dateOfBirth, int teamId)
Retrieve form data using name attribute of input tag from cshtml.
3.2.1.
string name is from
//<input class="form-control text-box single-line" id="Name" name="Name" type="text" value="">
3.2.2.
string gender is from
//<select id="Gender" name="Gender">...</select>
3.2.3.
string city is from
<input class="form-control text-box single-line" id="City" name="City" type="text" value="">
3.2.4.
DateTime dateOfBirth is from
//<input class="form-control text-box single-line" data-val="true" data-val-date="The field DateOfBirth
must be a date." data-val-required="The DateOfBirth field is required." id="DateOfBirth"
name="DateOfBirth" type="datetime" value="">
3.2.5.
int teamId is from
//<input class="form-control text-box single-line" data-val="true" data-val-number="The field TeamId must
be a number." data-val-required="The TeamId field is required." id="TeamId" name="TeamId" type="number"
value="">
-----
3.3.
//[HttpPost]
//public ActionResult Create3(BusinessLayer.Gamer gamer)
If the view has a lot of input,
then the previous two ways is not a good idea.
It is always better to retrieve form data using model binding.
The model of the cshtml is BusinessLayer.Gamer,
so we can pass the model object into HttpPost action.
The property value of model object will contain the value
from input or select tag from cshtml based on name attribute.
-----
3.4.
//[HttpPost]
//[ActionName("Create4")]
//public ActionResult Create_Post()
Retrieve form data using model binding by UpdateModel() or TryUpdateModel()
...
//BusinessLayer.Gamer gamer = new BusinessLayer.Gamer();
//UpdateModel<BusinessLayer.Gamer>(gamer);
//UpdateModel(gamer);
//TryUpdateModel(gamer);
-----
3.4.1.
UpdateModel() and TryUpdateModel() inspects all the HttpRequest inputs
such as posted Form data, QueryString,
Cookies and Server variables and populate the gamer object.
-----
3.4.2.
UpdateModel() throws an exception if validation fails.
TryUpdateModel() will never throw an exception and
return false if validation fails.
-----
3.4.3.
//UpdateModel(gamer, new[] { "Id", "Gender", "City", "DateOfBirth", "TeamId" });
//TryUpdateModel(gamer, new[] { "Id", "Gender", "City", "DateOfBirth", "TeamId" });
The second parameter of UpdateModel() and TryUpdateModel() is included properties.
In this case, it will only update the following properties into the model.
"Id", "Gender", "City", "DateOfBirth", "TeamId"
The Name property is not included so it will not be updated.
-----
3.4.4.
//TryUpdateModel(gamer, null, null, new[] { "Name" });
//UpdateModel(gamer, null, null, new[] { "Name" });
update all properties except Name property
```

3.4.5.

```
//TryUpdateModel<IGamer>(gamer);
```

```
//UpdateModel<IGamer>(gamer);
```

The UpdateModel() function will update only the properties that are present in the interface.

4.

```
//[HttpPost]
```

```
//Edit
```

4.1.

```
//[HttpPost]
```

```
//public ActionResult Edit(BusinessLayer.Gamer gamer)
```

Edit by Model binding will open the back door for unintended update.

4.2.

```
//[HttpPost]
```

```
//[ActionName("Edit2")]
```

```
//public ActionResult Edit_Post(int id)
```

Solved the unintended update.

Edit by UpdateModel() and TryUpdateModel()

4.3.

```
//[HttpPost]
```

```
//public ActionResult Edit3([Bind(Include = "Id, Gender, City, DateOfBirth, TeamId")]BusinessLayer.Gamer gamer)
```

Solved the unintended update.

Edit by Model binding with Bind include attribute

4.4.

```
//[HttpPost]
```

```
//public ActionResult Edit4([Bind(Exclude = "Name")]BusinessLayer.Gamer gamer)
```

Solved the unintended update.

Edit by Model binding with Bind exclude attribute

```
*/
```

3.2. OnlineGame.Web/Views/Gamer/Edit.cshtml

Add View

View name: Edit

Template: Edit

Model class: Gamer (BusinessLayer)

Data context class:

Options:

☐ Create as a partial view

☒ Reference script libraries

☐ Use a layout page:

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

Add Cancel

```

@using BusinessLayer
@model IEnumerable<BusinessLayer.Gamer>
@{
    Layout = null;
}
<p>
    @Html.ActionLink("Create New", "Create")
</p>
<table class="table">
    <tr>
        <th>
            @Html.DisplayNameFor(model => model.Name)
        </th>
        <th>
            @Html.DisplayNameFor(model => model.Gender)
        </th>
        <th>
            @Html.DisplayNameFor(model => model.City)
        </th>
        <th>
            @Html.DisplayNameFor(model => model.DateOfBirth)
        </th>
        <th>
            @Html.DisplayNameFor(model => model.TeamId)
        </th>
    <th></th>
</tr>
@foreach (Gamer item in Model)
{
    using (Html.BeginForm("Delete", "Gamer", new { id = item.Id }))
    {

        <tr>
            <td>
                @Html.DisplayFor(modelItem => item.Name)
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.Gender)
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.City)
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.DateOfBirth)
            </td>
            <td>
                @Html.DisplayFor(modelItem => item.TeamId)
            </td>
            <td>
                @Html.ActionLink("Edit", "Edit", new { id = item.Id }) |
                @Html.ActionLink("Details", "Details", new { id = item.Id }) |
                @Html.ActionLink("Delete", "Delete2", new { id = item.Id }) |
            </td>
        </tr>
    }
}

```

```

        <input type="button" value="Edit" onclick="location.href='@Url.Action("Edit", "Gamer", new{ id = item.Id })'" />
        <input type="button" value="Details" onclick="location.href='@Url.Action("Details", "Gamer", new{ id = item.Id })'" />
        <input type="submit" value="Delete"
        onclick="return confirm('Are you sure to delete? Id = @item.Id , Name = @item.Name, Gender = @item.Gender');" />
    </td>
</tr>
}
}
</table>
```