(T4)討論EntityFrameworkDbFirst連接資料庫。討論LinqToObject的Where  
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1. New Project

1.1. TSQL

1.2. Set up SQL Authentication

1.3. Create New Project : Sample

1.4. Entity Framework DbFirst

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2. Sample : Program.cs  
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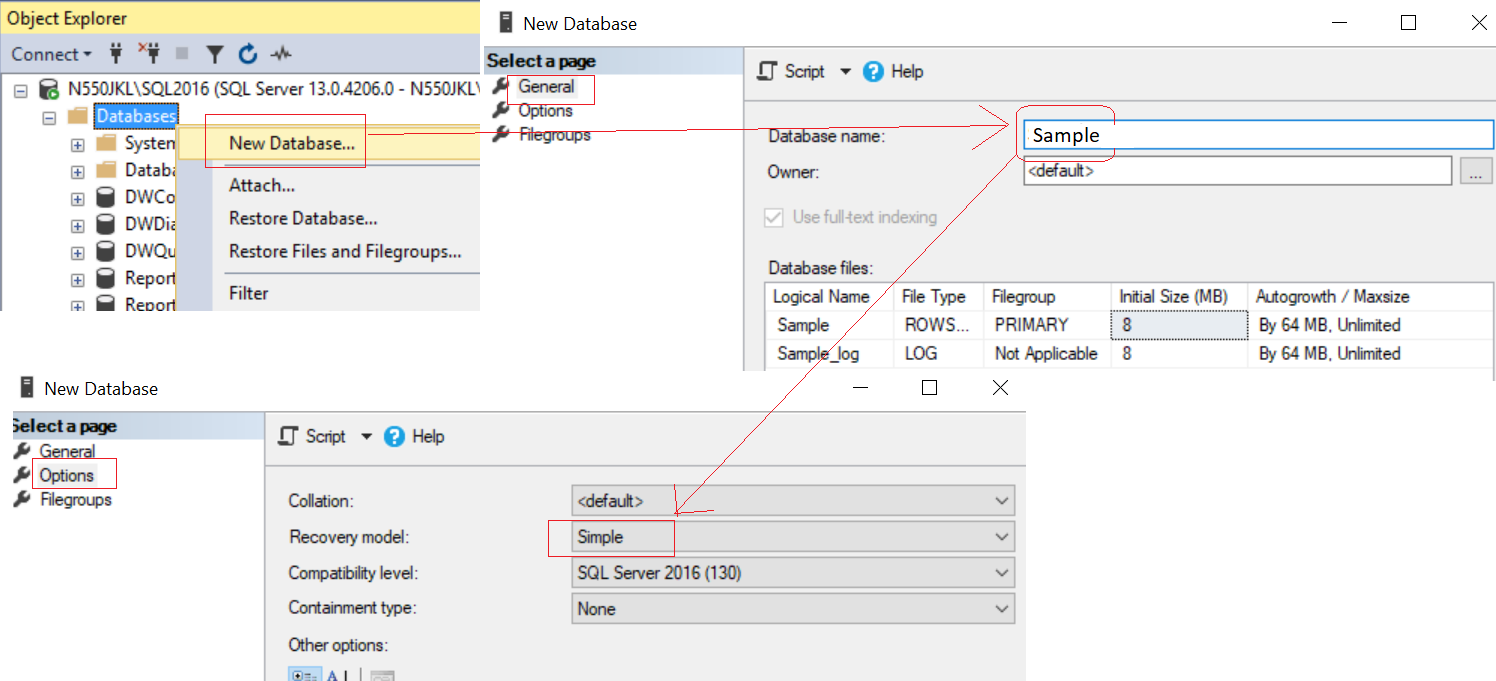
1. New Project

1.1. TSQL

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

Database Name : **Sample**

Options --> Recovery Model : Simple



--Create an Sample DataBase and Run the following TSQL

--Drop Table if it exists.

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

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 OBJECT\_ID('Team') IS NOT NULL

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

CREATE TABLE Team

    (

      Id INT PRIMARY KEY

             IDENTITY(1, 1) ,

      Name NVARCHAR(50) ,

    );

GO -- Run the previous command and begins new batch

INSERT  INTO Team

VALUES  ( 'Team01');

INSERT  INTO Team

VALUES  ( 'Team02');

INSERT  INTO Team

VALUES  ( 'Team03');

GO -- Run the previous command and begins new batch

CREATE TABLE Gamer

    (

      Id INT PRIMARY KEY

             IDENTITY(1, 1) ,

      [Name] NVARCHAR(100) ,

      Gender NVARCHAR(50) ,

      GameScore INT ,

      TeamId INT FOREIGN KEY REFERENCES Team ( Id )

    );

GO -- Run the previous command and begins new batch

INSERT  INTO Gamer

VALUES  ( 'Name01', 'Male', 5000, 1 );

INSERT  INTO Gamer

VALUES  ( 'Name02', 'Female', 4500, 2 );

INSERT  INTO Gamer

VALUES  ( 'Name03', 'Male', 6000, 1 );

INSERT  INTO Gamer

VALUES  ( 'Name04', 'Male', 3500, 2 );

INSERT  INTO Gamer

VALUES  ( 'Name05', 'Male', 4700, 2 );

INSERT  INTO Gamer

VALUES  ( 'Name06', 'Male', 4800, 1 );

GO -- Run the previous command and begins new batch

1.2. Set up SQL Authentication

In SQL server

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

-->

General Tab

Login Name :

**Tester**

Password:

**1234**

Default Database:

**Sample**

-->

Server Roles Tab

Select

**sysadmin**

-->

User Mapping Tab

Select **Sample**

Select every Roles.





Graphical user interface, text, application

Description automatically generated



1.3. Create New Project : Sample

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

Visual C# -->  **Console App** **(.Net Framework)** -->

Name: **Sample**

Graphical user interface, application, email

Description automatically generated



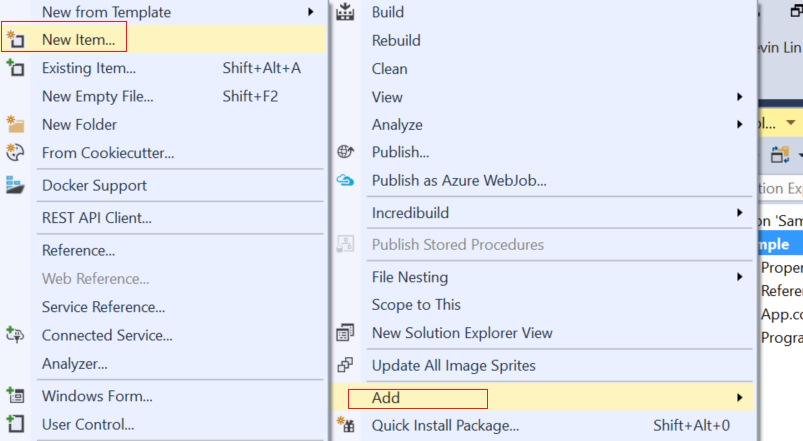


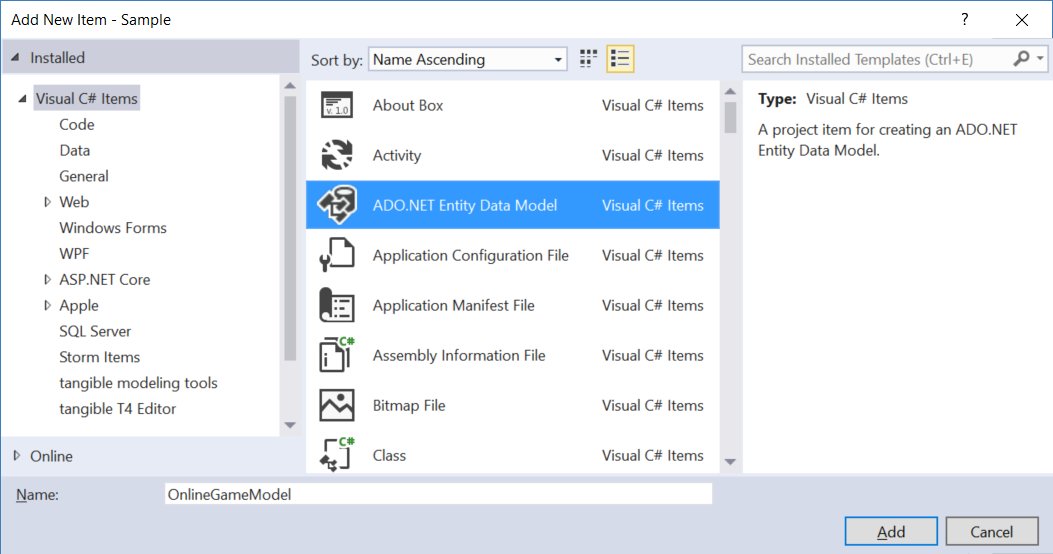
1.4. Entity Framework DbFirst

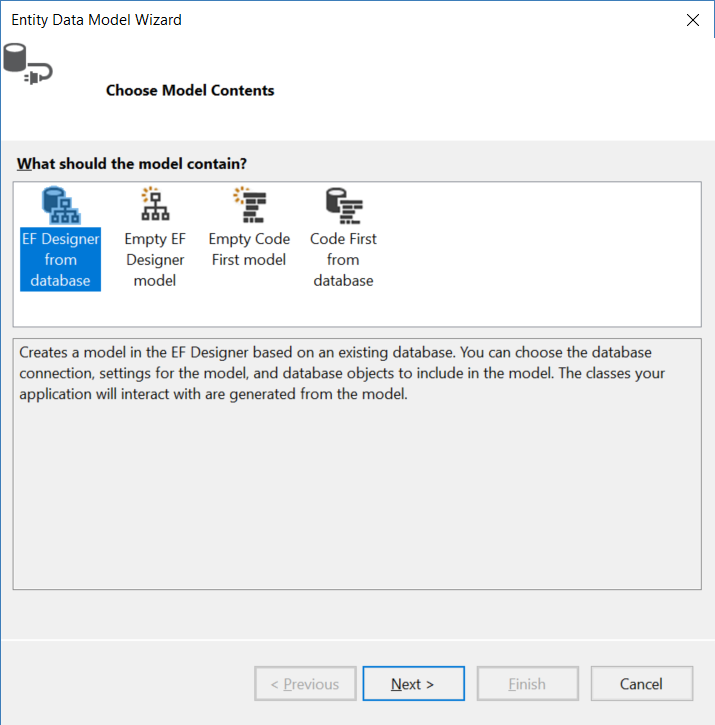
Project Name --> Right Click --> Add --> New Item ...

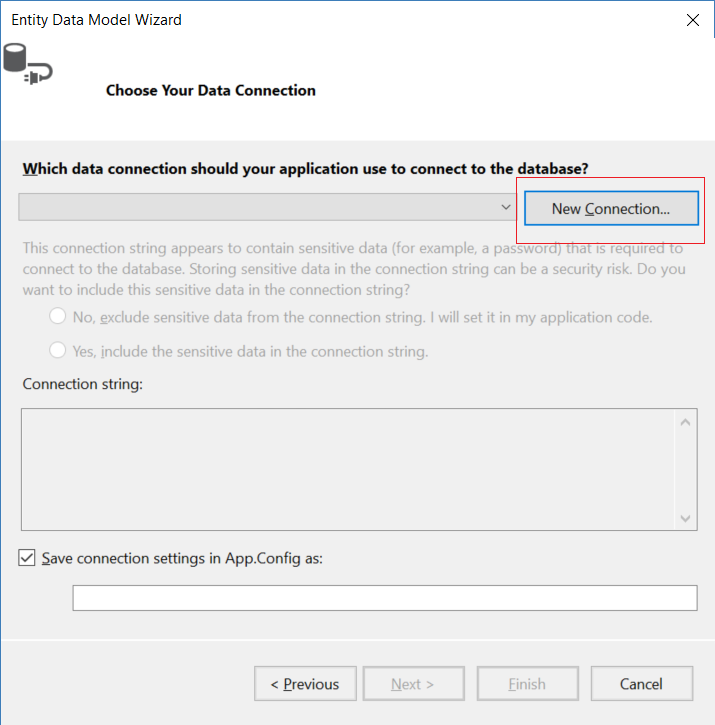
Visual C# -->  **ADO.NET Entity Data Model** -->

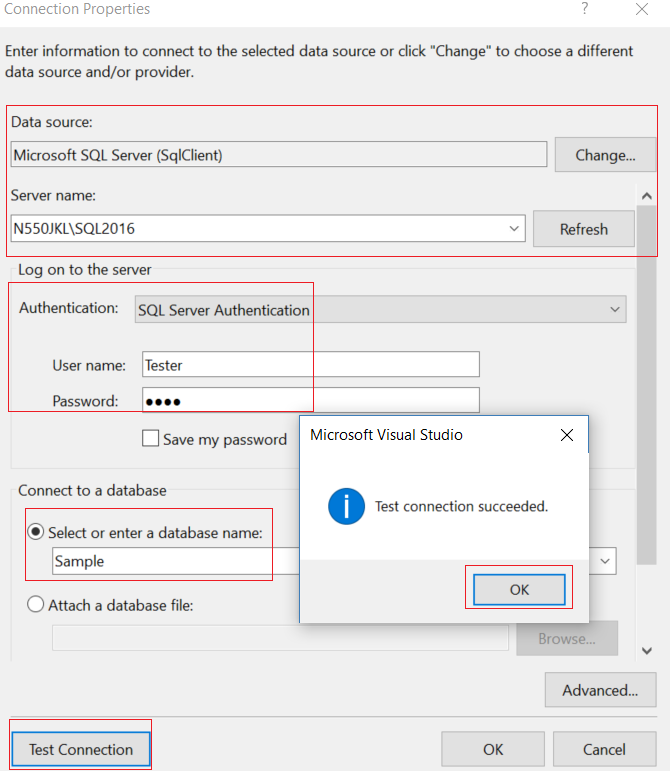
Name: **OnlineGameModel**

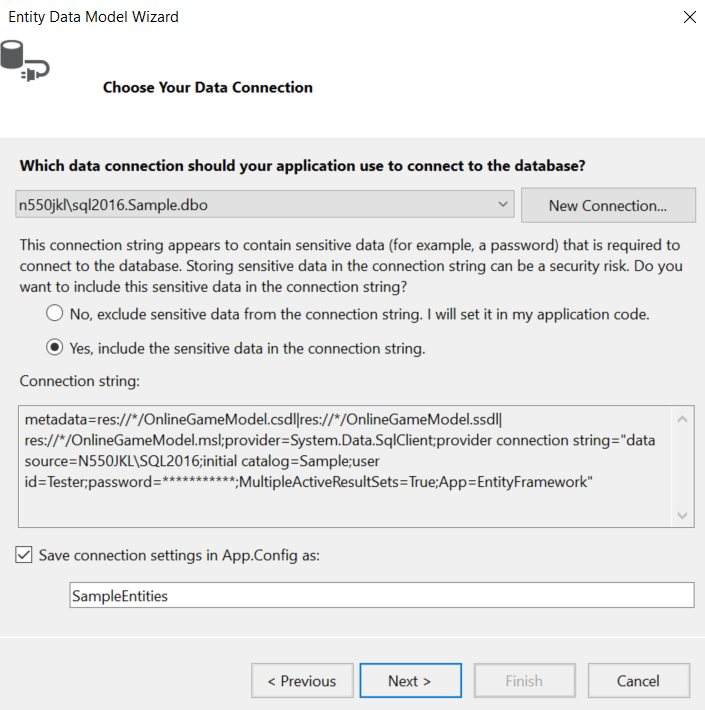


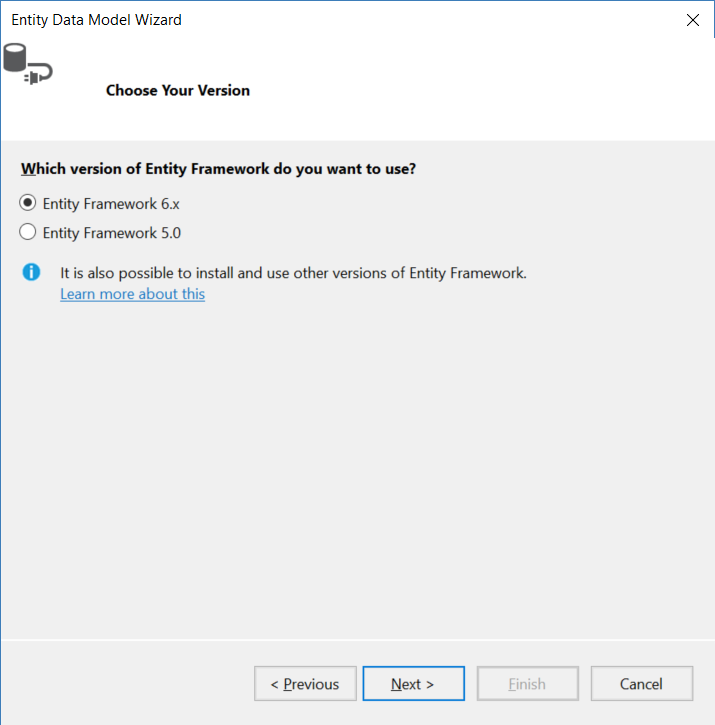


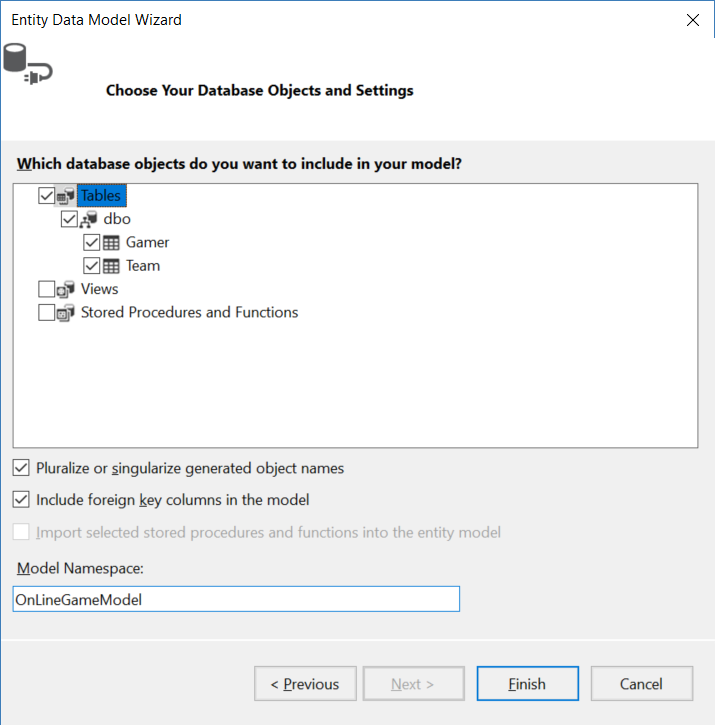


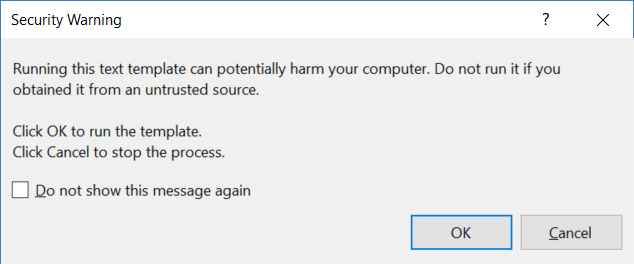


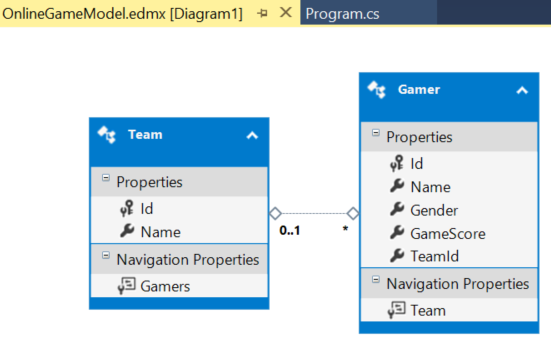












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2. Sample : Program.cs

using System;

using System.Data.Entity;

using System.Linq;

namespace Sample

{

    class Program

    {

        static void Main(string[] args)

        {

            // 1. ============================================

            Console.WriteLine("1. [ADO.NET](http://ado.net/) with Entity Framework 6 Sample");

            AdoNetWithEntityFramework6Sample();

            Console.ReadLine();

        }

        private static void AdoNetWithEntityFramework6Sample()

        {

            SampleEntities context = new SampleEntities();

            //1.1. teamDbSet -------------------------------

            Console.WriteLine("1.1. teamDbSet ------------");

            DbSet<Team> teamDbSet = context.Teams;

            foreach (Team teamDbSetItem in teamDbSet)

            {

                Console.WriteLine($"teamDbSetItem.Id=={teamDbSetItem.Id}, teamDbSetItem.Name=={teamDbSetItem.Name}");

            }

            //1.2. gamersDbSet -------------------------------

            Console.WriteLine("1.2. gamersDbSet ------------");

            DbSet<Gamer> gamersDbSet = context.Gamers;

            foreach (Gamer gamersDbSetItem in gamersDbSet)

            {

                Console.WriteLine($"gamersDbSetItem.Id=={gamersDbSetItem.Id}, gamersDbSetItem.Name=={gamersDbSetItem.Name}, gamersDbSetItem.Gender=={gamersDbSetItem.Gender}, gamersDbSetItem.GameScore=={gamersDbSetItem.GameScore}, gamersDbSetItem.TeamId=={gamersDbSetItem.TeamId}, gamersDbSetItem.Team.Name=={gamersDbSetItem.Team.Name}");

            }

            //1.3. team01AndTeam02Queryable -------------------------------

            Console.WriteLine("1.3. team01AndTeam02Queryable ------------");

            IQueryable<Team> team01AndTeam02Queryable = context.Teams.Where(t => t.Name.Equals("Team01") || t.Name.Equals("Team02"));

            foreach (Team team01AndTeam02QueryableItem in team01AndTeam02Queryable)

            {

                Console.WriteLine($"team01AndTeam02QueryableItem.Id=={team01AndTeam02QueryableItem.Id}, team01AndTeam02QueryableItem.Name=={team01AndTeam02QueryableItem.Name}");

            }

            //1.4. maleGamersInTeam01Item -------------------------------

            Console.WriteLine("1.4. maleGamersInTeam01Item ------------");

            IQueryable<Gamer> maleGamersInTeam01 = context.Gamers.Where(g => g.Team.Name.Equals("Team01") && g.Gender.Equals("Male"));

            foreach (Gamer maleGamersInTeam01Item in maleGamersInTeam01)

            {

                Console.WriteLine($"maleGamersInTeam01Item.Id=={maleGamersInTeam01Item.Id}, maleGamersInTeam01Item.Name=={maleGamersInTeam01Item.Name}, maleGamersInTeam01Item.Gender=={maleGamersInTeam01Item.Gender}, maleGamersInTeam01Item.Team.Name=={maleGamersInTeam01Item.Team.Name}");

            }

        }

    }

}

